

{7,"","","<I>","</I>","<TABLE>"}

procedure **pcwrap**_{HLRT} (page P)

 scan to the line 7 in P

 while the next occurrence of li in P occurs before the next occurrence of t

 scan in P to next occurrence of l_i ; save position as start of item attribute

 scan in P to next occurrence of r_i ; save position as end of item attribute

 scan in P to next occurrence of l_p ; save position as start of price attribute

 scan in P to next occurrence of r_p ; save position as end of price attribute

 return extracted, (item,price),.} pairs

FIGURE 1
(PRIOR ART)

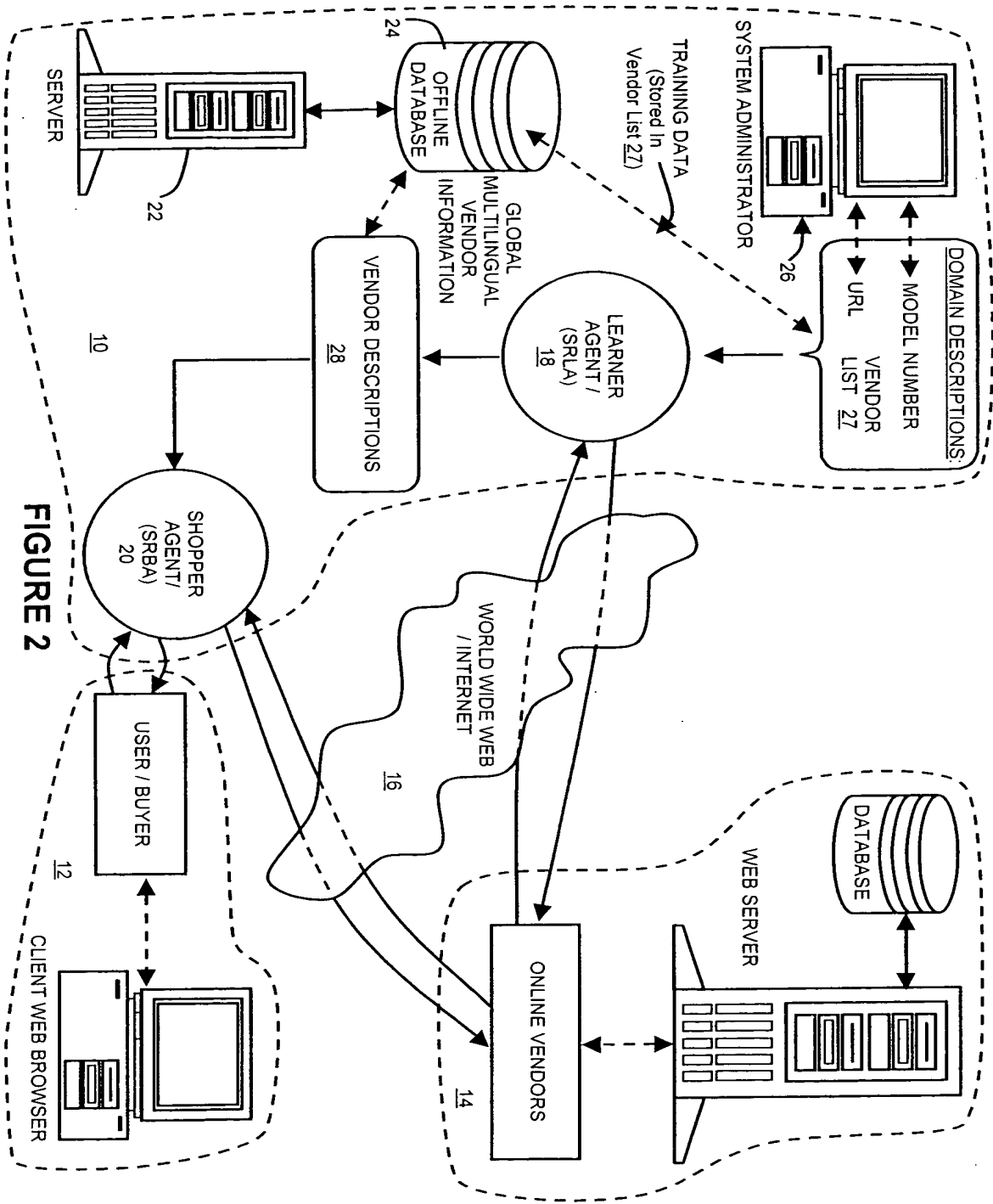


FIGURE 2

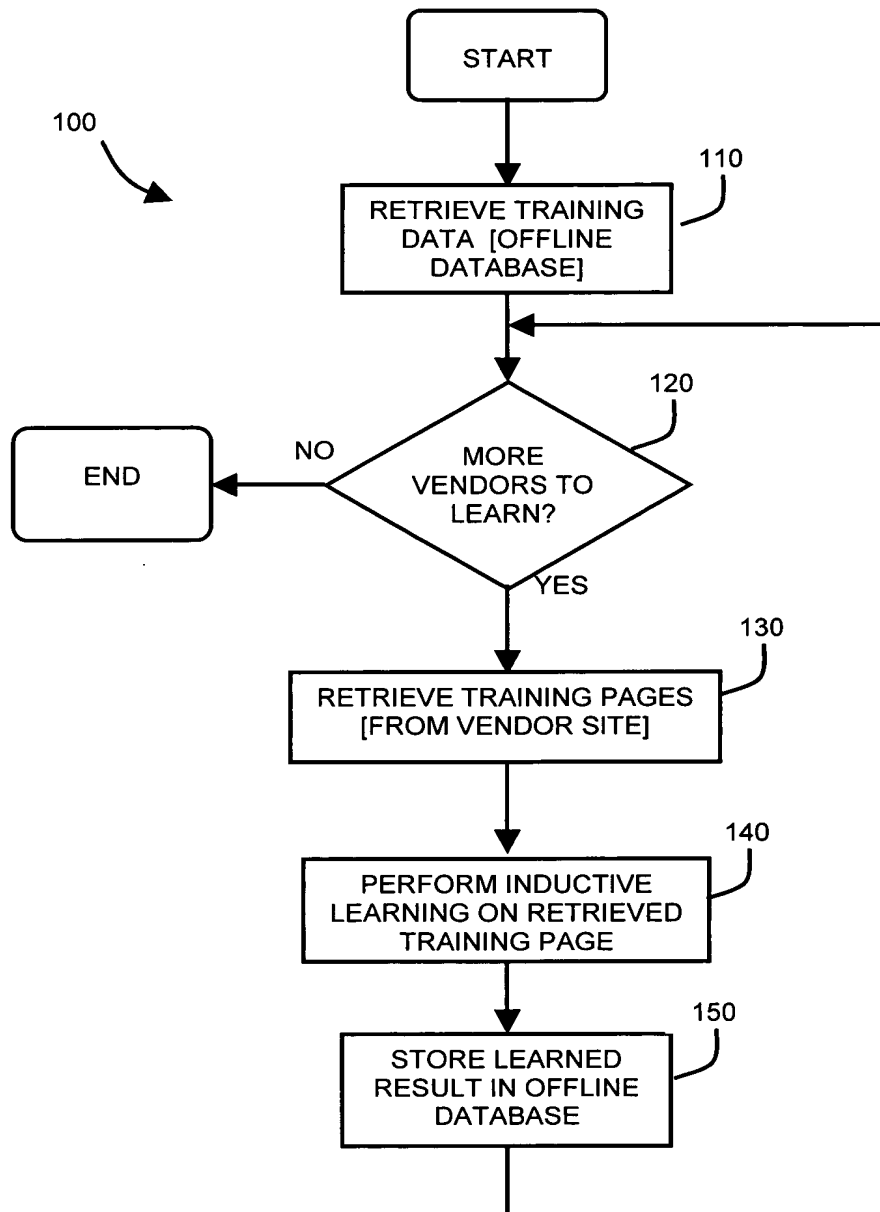


FIGURE 3

Element Name	Element Description
Vendor Name	Name of the online shop
Vendor URL	The URL of the online shop
Form URL	The URL to submit search data
Learning Domain	The domain used to learn the vendor description
Head	The end of header position of vendor's product pages. This element is learnt to reduce the product page searching space and thus shorten the product information extraction time
Tail	The start of footer position of vendor's product pages. Same as Head element, with this element the product information extraction time for Shopper Agent is shortened.
Left Delimiter of Item	The Shopper Agent uses these two delimiters to identify a product
Right Delimiter of Item	
Left Delimiter of Price	The Shopper Agent uses these two delimiters to locate a product's price information
Right Delimiter of Price	

FIGURE 4

EXAMPLE	
Element Name	Element Description
Vendor Name	800.com
Vendor URL	http://www.800.com
Form URL	http://www.800.com/search/srchrsults.asp?qs=1&slteentry=All&entry=
Learning Domain	Md
Head	1230
Tail	</BODY>
Left Delimiter of Item	/td width="12">
Right Delimiter of Item	</fon
Left Delimiter of Price	Your Price: \$
Right Delimiter of Price	

FIGURE 5

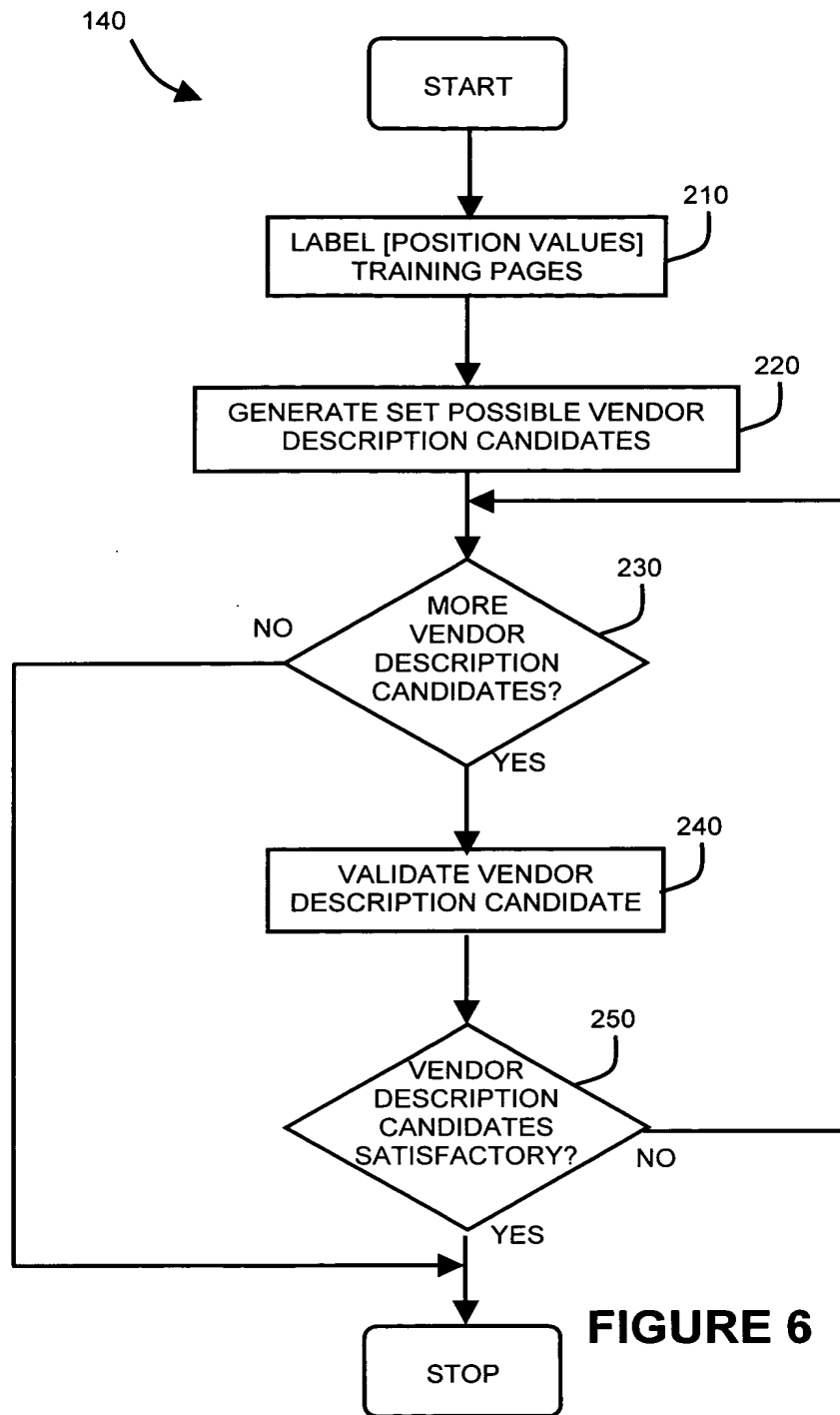


FIGURE 6

MD PRICE		<HTML>
		<TITLE>A Simple Product Catalogs</TITLE>
		<BODY>
Model Number	PRICE (US\$)	<H2> MD Price </H2>
HM381MD	399.95	<TABLE BORDER=1>
MD2070	599.95	<TR BGCOLOR=ORANGE><TH> Model Number </TH>
MD203	249.95	<TH> PRICE(US\$)</TH></TR>
MDR3	399.95	<TR><TD> HM381MD</TD><TD><I>399.95</I></TD></TR>
		<TR><TD> MD2070</TD><TD><I>599.95</I></TD></TR>
		<TR><TD> MD203</TD><TD><I>249.95</I></TD></TR>
		<TR><TD> MDR3</TD><TD><I>399.95</I></TD></TR>
		</TABLE>
		<P>
		<HR WIDTH=200 ALIGN=LEFT>
		<P>
		 End Of The Product Catalog
		</BODY>
		</HTML>

FIGURE 7

Product Entry	Labels
{ HM381MD, 399.95}	{<<174, 180>, <197, 202>>}
{ MD2070, 599.95}	{<<229, 234>, <251, 256>>}
{ MD203, 249.95}	{<<283, 287>, <304, 309>>}
{ MDR3, 399.95}	{<<336, 339>, <356, 361>>}

FIGURE 8

Product Entry	Labels
{ PRODUCT, PRICE}	{<PRODUCT LEFT DELIMITER, PRODUCT RIGHT DELIMITER>, <PRICE LEFT DELIMITER, PRICE RIGHT DELIMITER>}
***	***

FIGURE 9

Delimiter	Candidates
Item Left Delimiter	<TR><TD> TR><TD> R><TD> ><TD> <TD> TD> D> > B> >
Item Right Delimiter	</TD><TD>< > </TD><TD>< </TD><TD>< </TD><TD> </TD><TD </TD><T </TD>< </TD> </TD </T </ < </B </ <
Price Left Delimiter	</TD><TD>< > /B></TD><TD>< > B></TD><TD>< > ></TD><TD>< > </TD><TD>< > /TD><TD>< > TD><TD>< > D><TD>< > ><TD>< > <TD>< > TD>< > D>< > >< > < > > >

FIGURE 10A

FIGURE 10B

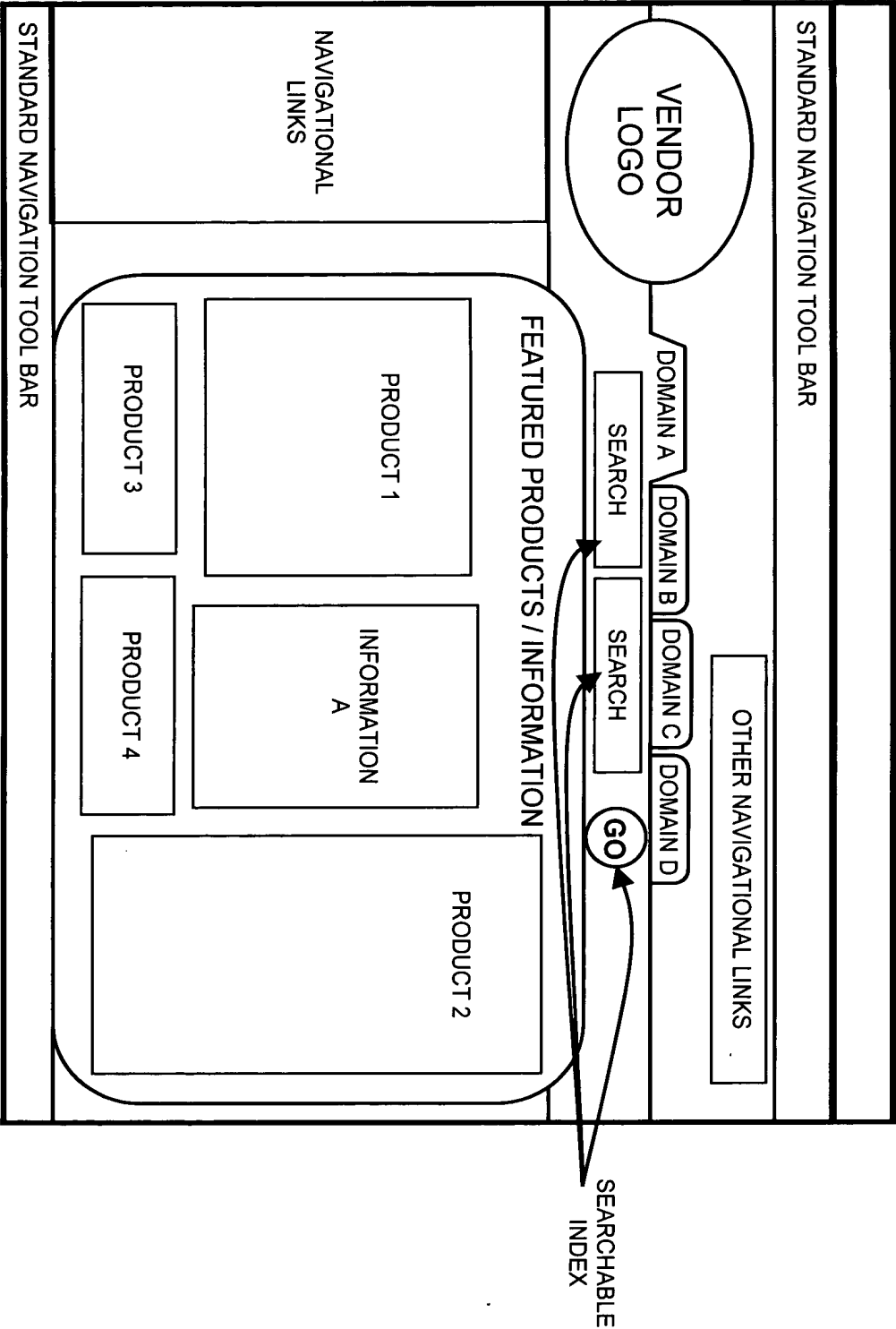


FIGURE 11

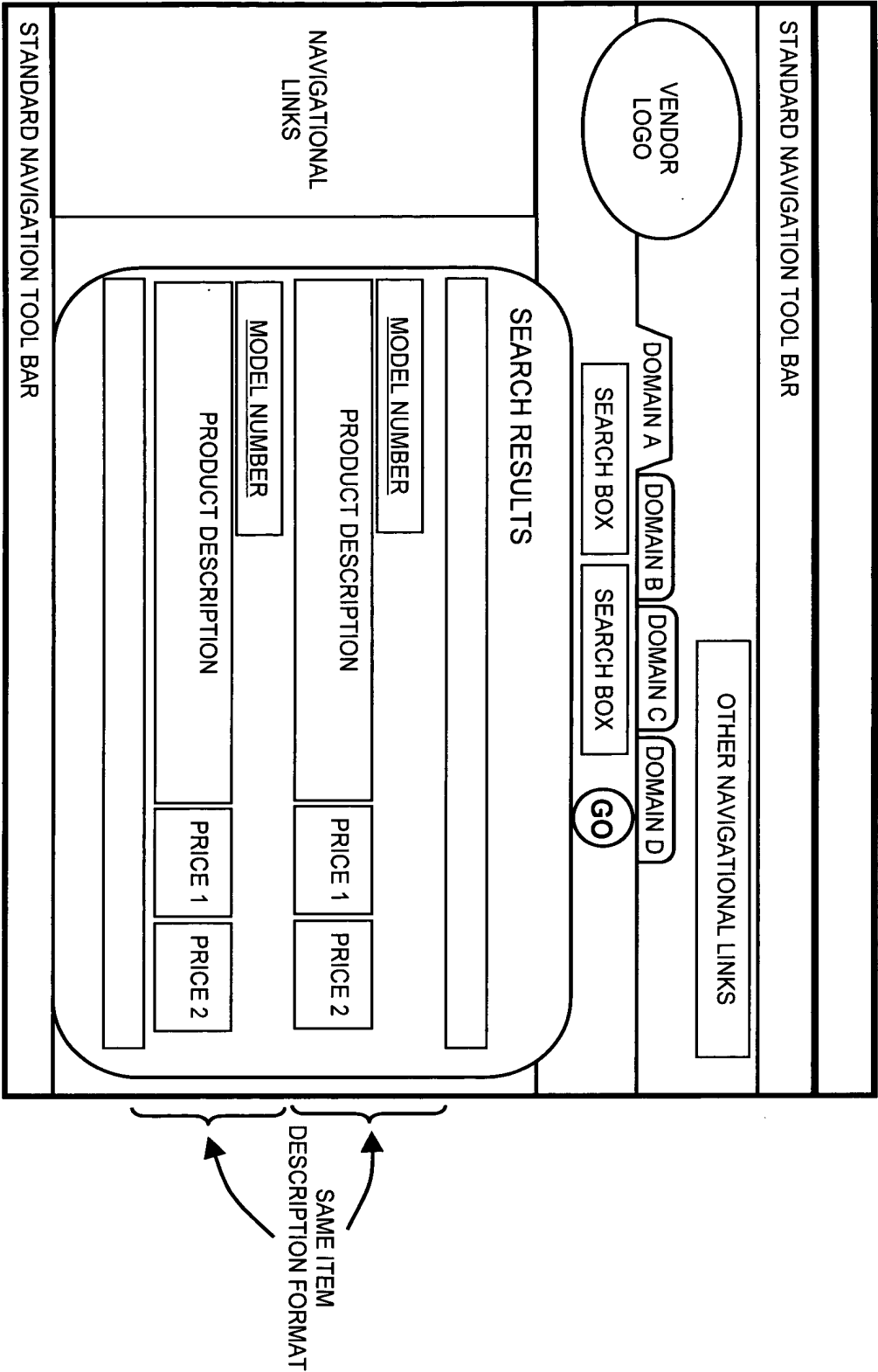


FIGURE 12

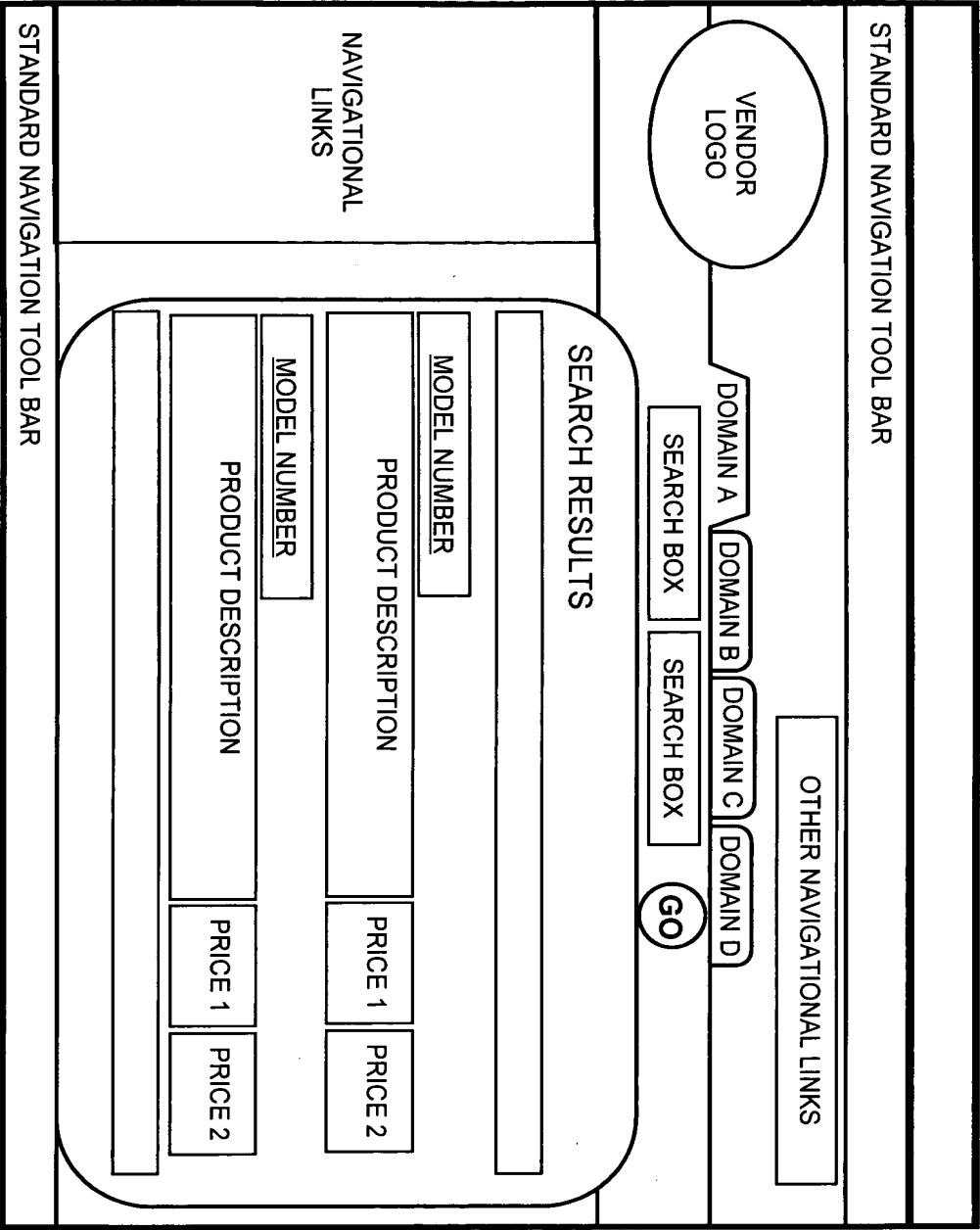
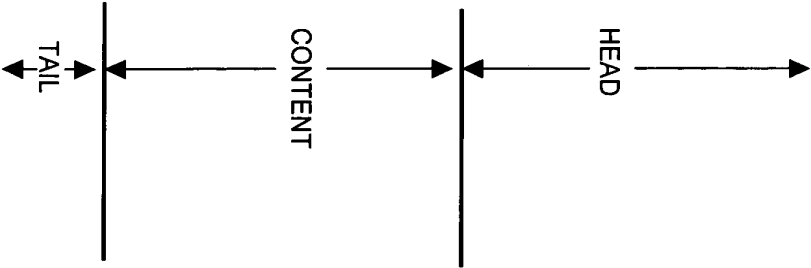


FIGURE 13



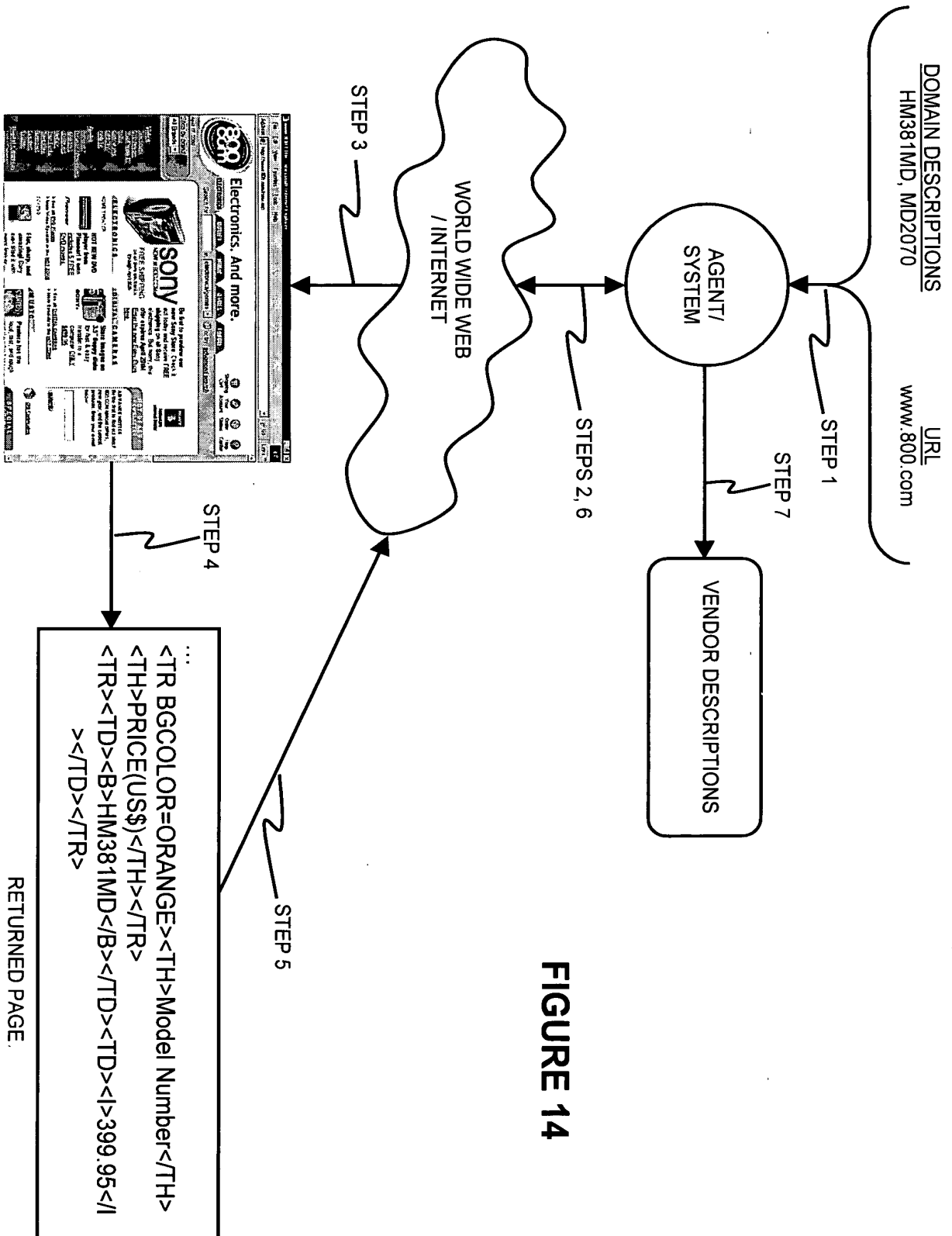


FIGURE 14

www.800.COM - Netscape

Can't decide on the perfect gift?

800.COM

ELECTRONICS **MOVIES** **MUSIC** **GAMES** **FORUM**

Search for: electronics

Search Results

Products
Your search for md returned 19 items. Showing items 1 - 19.

Product Search Results	Price
Kenwood MASK MD Music System HM381MD Kenwood MASK Music System, Self-Hiding Revolving Faceplate, 10 Watts Per Channel, MD Recorder, CD Player, Sophisticated Styling, Silver with Gray Accents, 2-Way High Gloss Speakers, Remote Control. <i>Usually ships within 24 hours</i>	List Price \$500.00 Your Price \$399.95 wish list buy now
Kenwood MiniDisc Recorder MD2070 Kenwood MiniDisc Recorder, 10 Second Digital Anti Skip, 24-Bit Resolution A/D and D/A Converters, CD Text Transfer (via Direct Digital Connection), Sampling Rate Converter, Disc and Track Naming, Silver Finish, Remote Control with Jog Shuttle. <i>Usually ships within 24 hours</i>	List Price \$700.00 Your Price \$599.95 wish list buy now
Kenwood MiniDisc Recorder MD203 Kenwood MiniDisc Recorder, 10 Second Digital Anti Skip, 20-Bit Resolution A/D and D/A Converters, Sampling Rate Converter, Disc and Track Naming, Black Finish, Remote Control. <i>Usually ships within 24 hours</i>	List Price \$300.00 Your Price \$249.95 wish list buy now

VIDEO
Teletext
DVD Players
TV-Recorders
VCRs
Camcorders
Hi-Fi

AUDIO
Stereos
Receivers
Preamps / Processors
Amplifiers
Equalizers
CD Players
Tape Decks
Hi-Fi
Speakers

DIGITAL CAMERAS

Document Done

FIGURE 15A

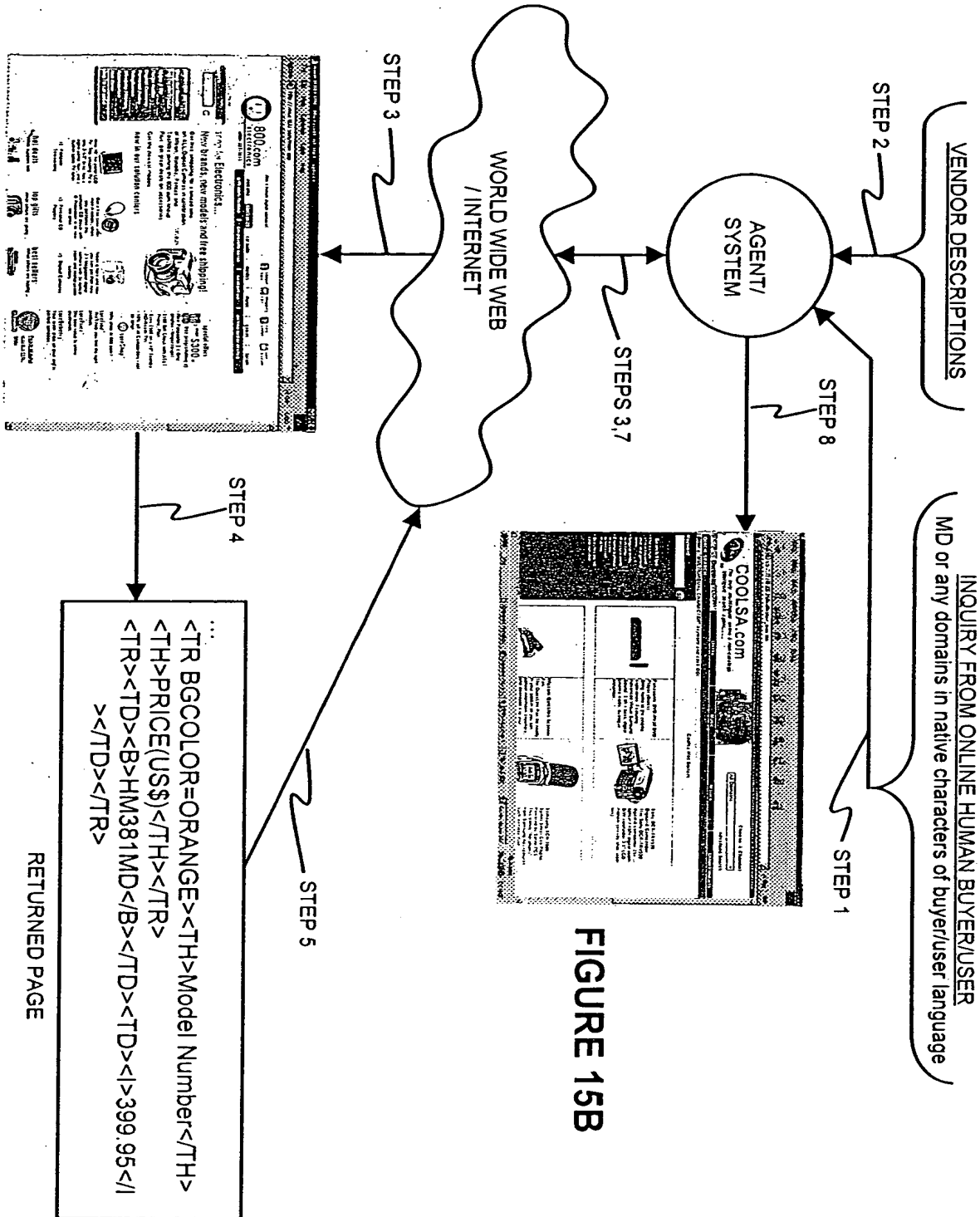


FIGURE 15B

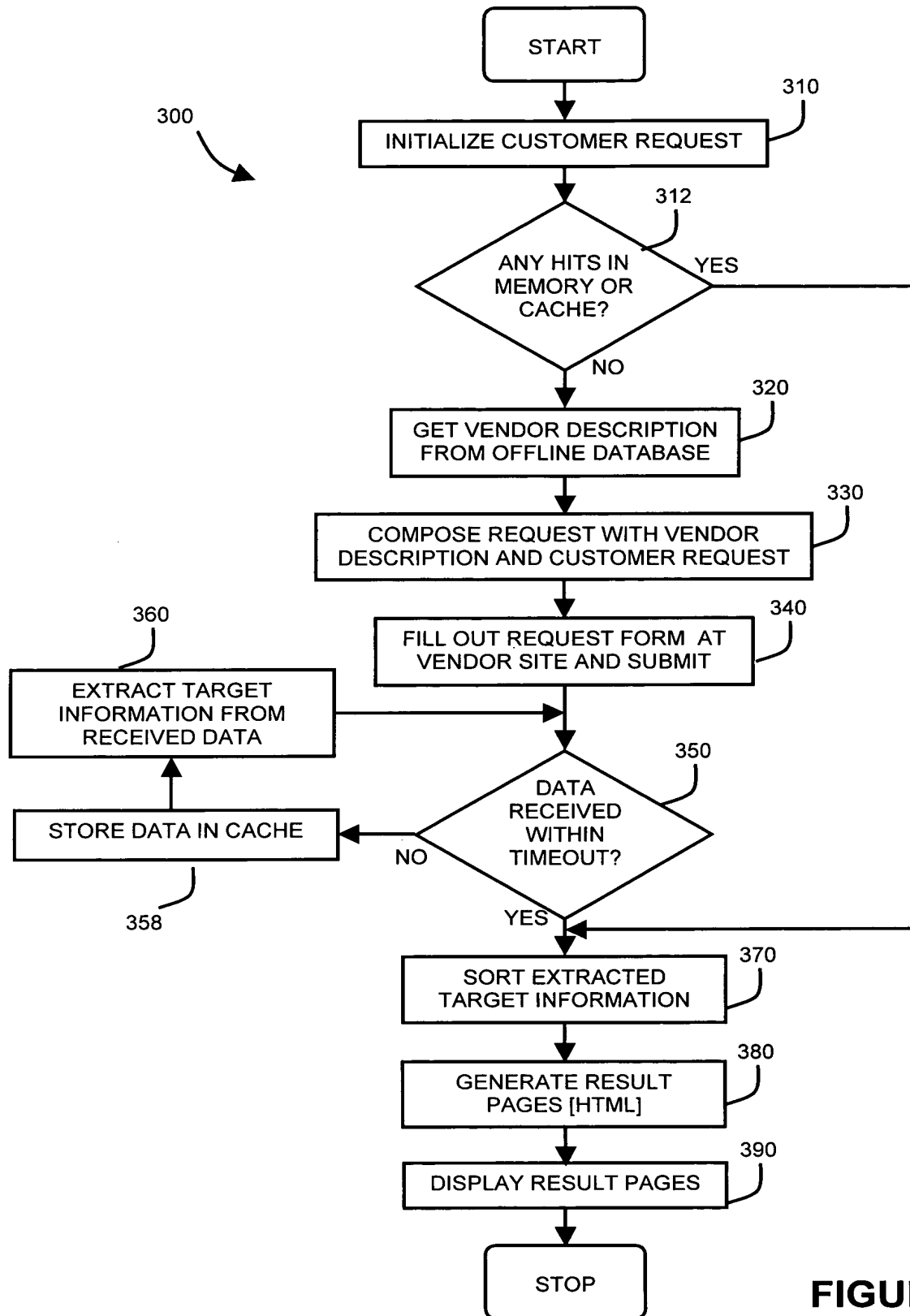


FIGURE 15C

Vendor Information [X]

Vendor Information | Add Vendor

Add Vendor

Details

Vendor Name:

URL:

Form's URL:

Learning Domain:

☒ Provide Training Examples

☐ Enter Wrapper For This Vendor

Head:

Left Delimiter of Item:

Left Delimiter of Price:

Tail:

Right Delimiter of Item:

Right Delimiter of Price:

Save

OK Cancel Apply

FIGURE 16

Vendor Information [X]

Vendor Information | Add Vendor

Add Vendor

Details

Vendor Name:

URL:

Form's URL:

Learning Domain:

☒ Provide Training Examples

☐ Enter Wrapper For This Vendor

Head:

Tail:

Left Delimiter of Item:

Right Delimiter of Item:

Left Delimiter of Price:

Right Delimiter of Price:

Save

OK **Cancel** **Apply**

FIGURE 17

Vendor Information [X]

Vendor Information | **Add Vendor**

Vendor Information

Vendor Name:

Details

Vendor Name:

URL:

Form's URL:

Learning Domain:

Wrapper

Head: <input type="text"/>	Tail: <input type="text"/>
Left Delimiter of Item: <input type="text"/>	Right Delimiter of Item: <input type="text"/>
Left Delimiter of Price: <input type="text"/>	Right Delimiter of Price: <input type="text"/>

FIGURE 18

Vendor Information [X]

Vendor Information | Add Vendor

Vendor Information

Vendor Name:

Details

Vendor Name:

URL:

Form's URL:

Learning Domain:

Wrapper

Head:

Tail:

Left Delimiter of Item:

Right Delimiter of Item:

Left Delimiter of Price:

Right Delimiter of Price:

FIGURE 19

Training Data [X]

Training Example

Vendor:

Vendor	Training Example
1cache.com	DVD Virtual Notebook Theater with I-Glas
1cache.com	JVC XV523GD Dolby Digital DVD Player
1cache.com	Pioneer DVL-919 - Combination LD/DVD/

Vendor:

Example:

FIGURE 20

Learn Vendor Description

Learn Vendor Description

Learning Option

☒ **Learn All**

☐ **Learn One**

Vendor Name:

Learn Now **Exit**

FIGURE 21

Learn Vendor Description

Learning Option

☐ Learn All

☒ Learn One

Vendor Name:

FIGURE 22

Vendor Information [X]

Vendor Information | Add Vendor

Vendor Information

Vendor Name:

Details

Vendor Name:

URL:

Form's URL:

Learning Domain:

Wrapper

Head: <input type="text" value="5230"/>	Tail: <input type="text" value="D></TD><TD></TD></TR></"/>
Left Delimiter of Item: <input type="text" value="G SRC=/img/trans_1x1.gif BORDER=0 WID"/>	Right Delimiter of Item: <input type="text" value="</b"/>
Left Delimiter of Price: <input type="text" value="</TD> <TD ALIGN=right><FON"/>	Right Delimiter of Price: <input type="text" value="</T"/>

FIGURE 23

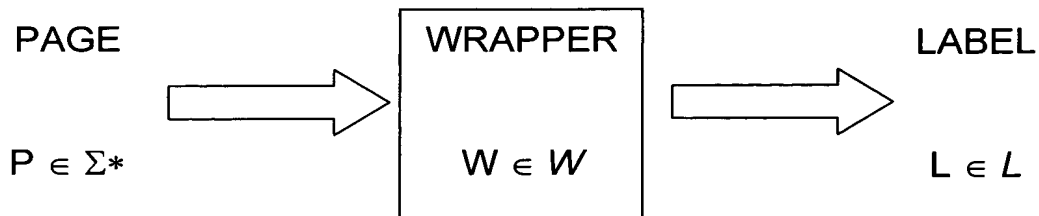


FIGURE 24

```

procedure execHLRT (wrapper (h, li, ri, lp, rp, t), page P)
    m ← 0
    scan in P to line h
    while the next occurrence of li in P occurs before the next occurrence of t
        m ← m + 1
        scan in P to the next occurrence of li in P; save position as bm,i
        scan in P the next occurrence of ri; save position as em,i
        scan in P to the next occurrence of lp in P; save position as bm,p
        scan in P to next occurrence of rp; save position as em,p
    return label { . . . , <<bmi, emi>, <bmp, emp>> }

```

FIGURE 25

Procedure **learn**_{HLRT} (examples ϵ)

1. Generate the candidate sets **Cands**_r(l, ϵ), **Cands**_i(l, ϵ), **Cands**_r(p, ϵ), **Cands**_i(p, ϵ).
2. Enumerate the cross product of these candidate sets; each element $W = (h, l_i, r_i, l_p, r_p, t)$, of this cross product is a wrapper. Halt if W is satisfactory i.e., **exec**_{LR}(W, P_n) = L_n , for every $(P_n, L_n) \in \epsilon$.

FIGURE 26


```

/*
* The main problem
*/
procedure learnHLRT (examples  $\epsilon$ ) for each  $1 < k < K$ 
    for each  $u \in \text{cands}_l(p, \epsilon)$ : if  $\text{valid}_l(u, p, \epsilon)$  then  $l_p \leftarrow u$  and terminate this loop
    for each  $u \in \text{cands}_r(i, \epsilon)$ : if  $\text{valid}_r(u, i, \epsilon)$  then  $r_i \leftarrow u$  and terminate this loop
    for each  $u \in \text{cands}_r(p, \epsilon)$ : if  $\text{valid}_r(u, p, \epsilon)$  then  $r_p \leftarrow u$  and terminate this loop
    for each  $u_{li} \in \text{cands}_l(i, \epsilon)$ 
    for each  $u_h \in \text{cands}_h(\epsilon)$ 
        for each  $u_t \in \text{cands}_t(\epsilon)$ 
            if  $\text{valid}_{l,h,t}(u_{li}, u_h, u_t, \epsilon)$  then
                 $l_i \leftarrow u_{li}$ ,  $h \leftarrow u_h$ ,  $t \leftarrow u_t$ , and terminate these three loops
    return HLRT wrapper ( $h, l_i, r_i, l_p, r_p, t$ )

/*
*Generate a set of candidates for left delimiter of price attribute
*/
procedure  $\text{cands}_l(\text{attribute price, examples } \epsilon)$ 
    return the set of all suffixes of the shortest string in  $\text{neighbors}_l(\text{price}, \epsilon)$ 

/*
*Generate a set of candidates for right delimiter of attribute a. Here a could be item or price
*/
procedure  $\text{cands}_r(\text{attribute a, examples } \epsilon)$ 
    return the set of all prefixes of the shortest string in  $\text{neighbors}_r(a, \epsilon)$ 

/*
* Generate a set of candidates for a page's head
*/
procedure  $\text{cands}_h(\text{examples } \epsilon)$ 
    return the set of all substrings of the shortest string in  $\text{heads}(\epsilon)$ 

/*
*Generate a set of candidates for a page's tail
*/
procedure  $\text{cands}_t(\text{example } \epsilon)$ 
    return the set of all substrings of the shortest string in  $\text{tails}(\epsilon)$ 

/*
*Determine whether a particular candidate for the left delimiter of price is valid
*This procedure applies constraints C3
*/
procedure  $\text{valid}_l(\text{candidate } u, \text{attribute price, examples } \epsilon)$ 
    for each  $s \in \text{neighbors}_l(\text{price}, \epsilon)$ : if  $u$  is not a proper suffix of  $s$  then return FALSE

```

Figure 27A

```

for each  $s \in \text{tails}(\varepsilon)$ : If  $u$  is a sub string of  $s$  then return FALSE
return TRUE

/*
*Determine whether a particular candidate for the right delimiter of item or price is
*valid
*This procedure applies constraints C1 and C2
*/
procedure validr(candidate  $u$ , attribute  $a$ , examples  $\varepsilon$ )
for each  $s \in \text{attrs}(a, \varepsilon)$ : if  $u$  is a sub string of  $s$  then return FALSE
for each  $s \in \text{neighbors}(a, \varepsilon)$ : if  $u$  is not a prefix of  $s$  then return FALSE
return TRUE

/*
*Determine whether a particular combination of candidate  $u_h$ ,  $u_t$ , and  $u_l$  for  $h$ ,  $t$ , and
* $l$  respectively are satisfactory.
*/
procedure validl,h,t(candidates  $u_l$ ,  $u_h$ ,  $u_t$ , example  $\varepsilon$ )
for each  $s \in \text{heads}(\varepsilon)$ 
    if is not a sub string of  $s$  then return FALSE
    if  $U_{l1}$  is not a proper suffix of scan ( $s$ ,  $U_h$ ) then return FALSE
    if  $U_t$  occurs before  $U_{l1}$  in scan ( $s$ ,  $U_h$ ), then return FALSE
for each  $s \in \text{tails}(\varepsilon)$ 
    if  $U_t$  is not a sub string of  $s$  then return FALSE
    if  $U_l$  occurs before  $U_t$  in  $s$  then return FALSE
for each  $s \in \text{seps}(\varepsilon)$ 
    if  $U_l$  is not a proper suffix of  $s$  then return FALSE
    if  $U_t$  occurs before  $U_l$  in  $s$  then return FALSE
return TRUE

/*
*Return a set of containing all values of a attribute, either item( $i$ ) or price( $p$ ) in each
*example
*/.
procedure attrs(attribute  $a$ , examples  $\varepsilon$ )
return  $U_{(Pn,Ln)} \in \varepsilon(Pn[b_{m,a}, e_{m,a}] | < \dots, (b_{m,k}, e_{m,k}), \dots > \in L_n)$ 

/*
*Return all strings to the left of an attribute, whether these strings are in the heads
*or the bodies of the pages
*/
procedure neighborsl(attribute  $a$ , examples  $\varepsilon$ )
if  $a=i$  then return seps ( $i$ ,  $\varepsilon$ )  $\cup$  heads ( $\varepsilon$ ) else return seps ( $a$ ,  $\varepsilon$ )
/*

```

FIGURE 27B

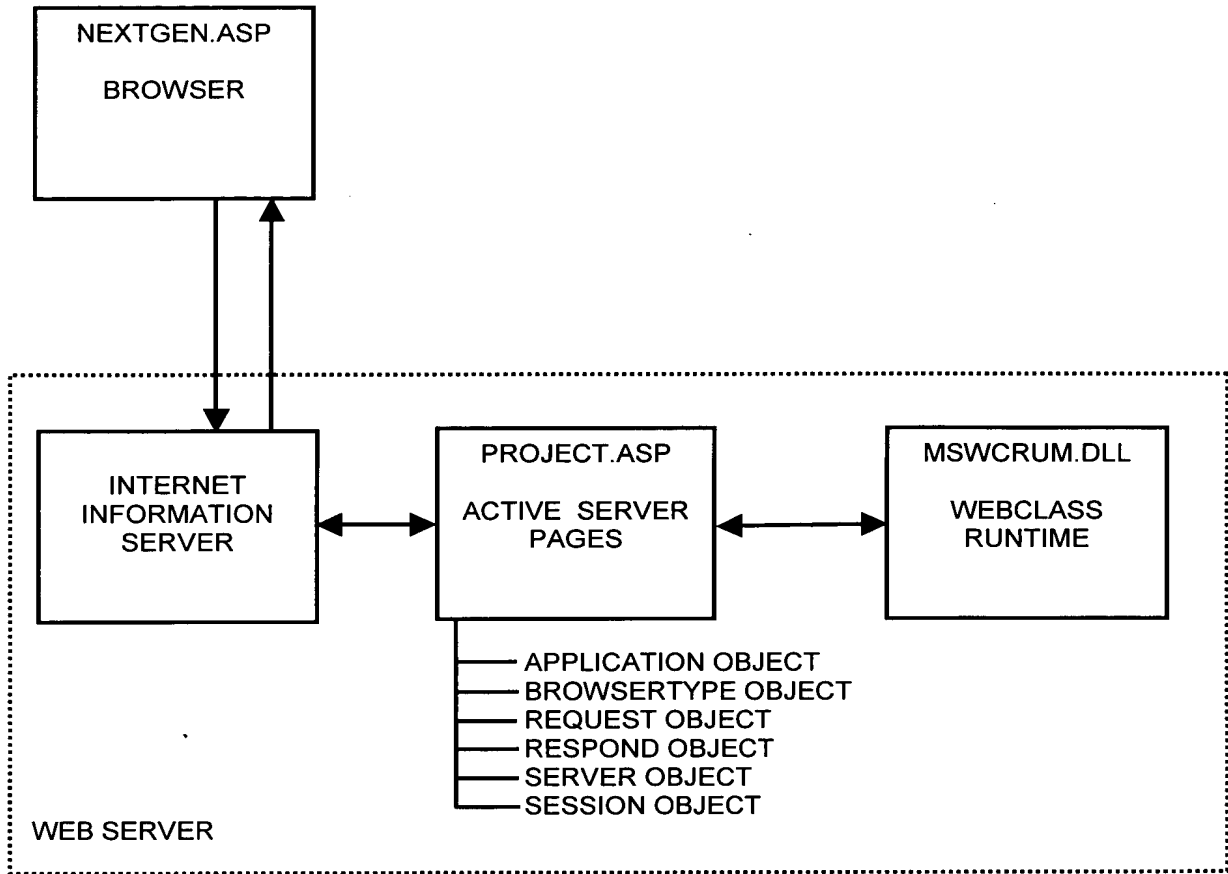


FIGURE 28

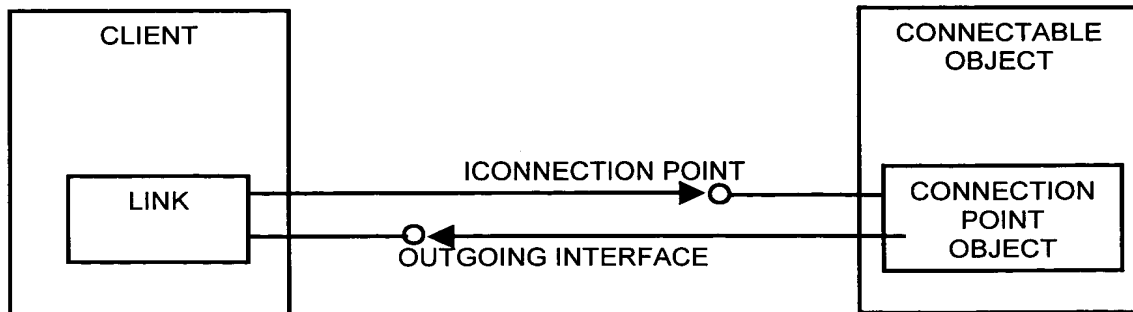


FIGURE 29

FIGURE 30

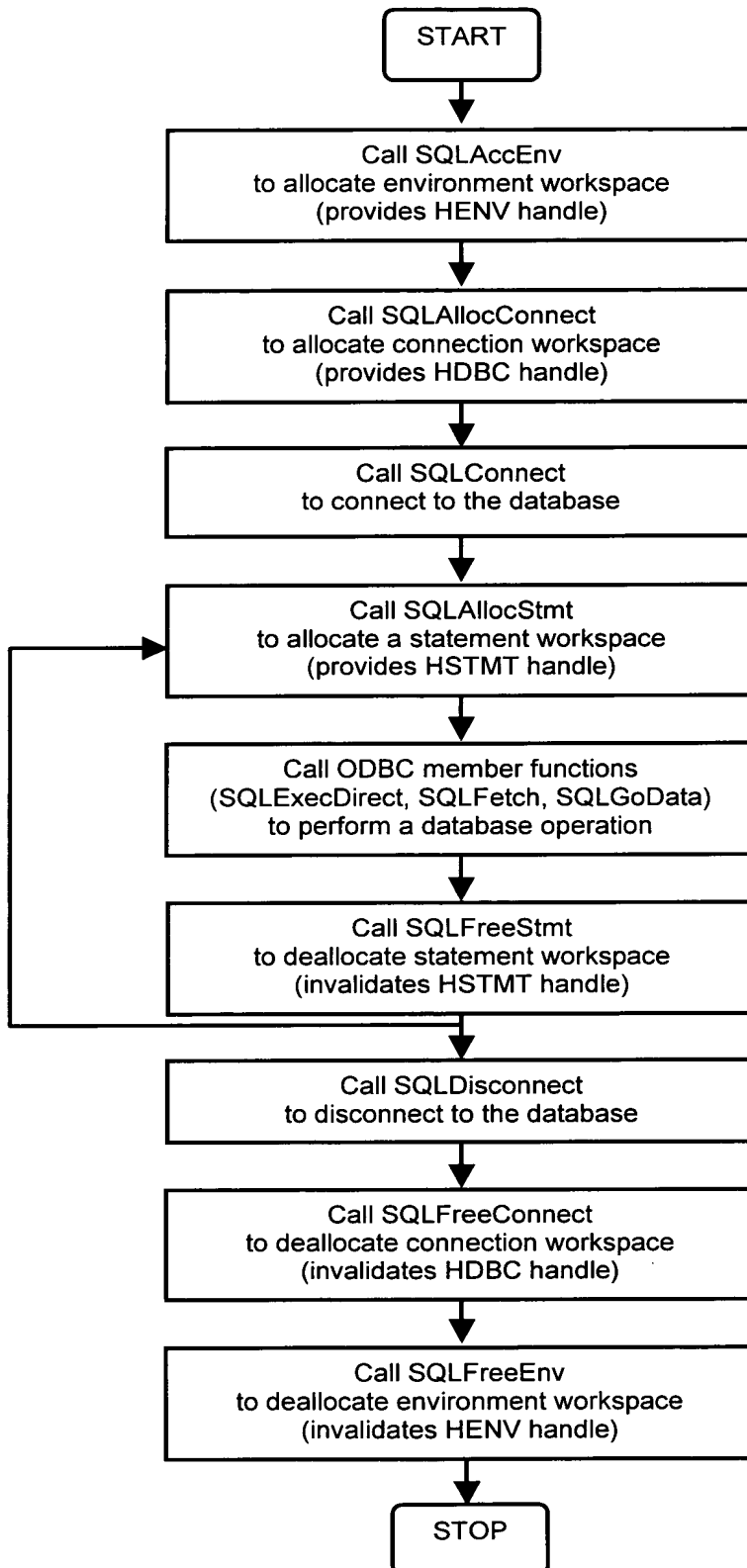
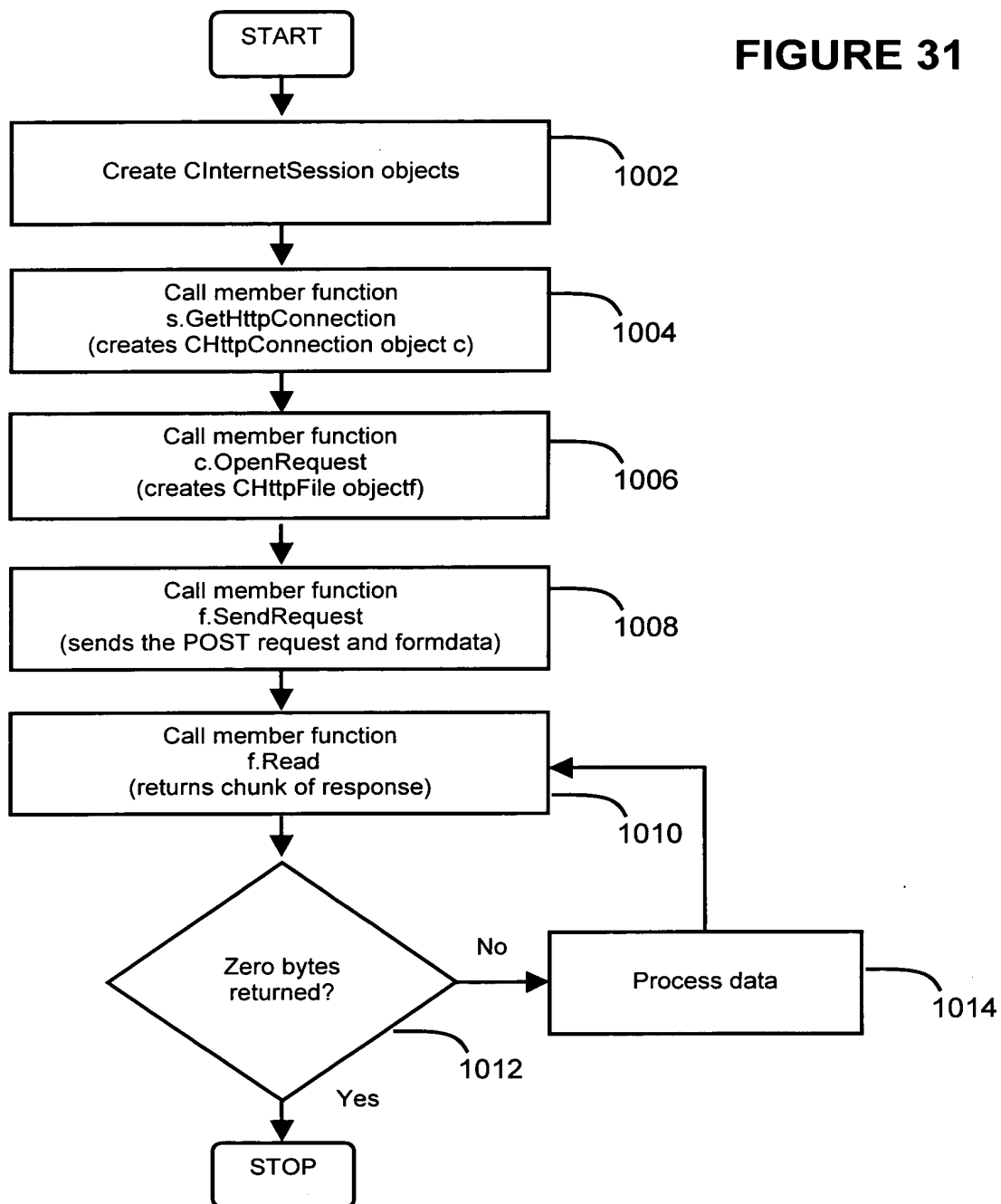


FIGURE 31







NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE			
WEBSITE LOGO		Choose a Channel All Ontological Domains 	
Advanced Search			
QUICK SEARCH			
Enter a "MULTILINGUAL CHARACTER" keyword and click GO!			
Keyword: <input type="text"/>			
SEARCH TIPS * * *			
MEMBER SIGN IN			
<input type="text"/>		<input type="text"/>	
<input type="text"/>		<input type="text"/>	
<input type="button" value="Login"/>		<input type="button" value="Reset"/>	
 Abcd.com cdef.com 1234z.com 23ezid..com pkkw.com erf5icjn.com		 Submit!	
WEBSITE INTRODUCTORY TEXT AND IMAGES		Reverse Advertising Sites	

FIGURE 32

<div>NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE</div>				
<div>WEBSITE LOGO</div>				
<div>Choose a Channel</div> <div>ALL G2B PROCUREMENT DOMAINS</div>				
<div>Advanced Search</div>				
<div>QUICK SEARCH</div>				
<div>Enter a "MULTILINGUAL CHARACTER" keyword and click GO!</div>				
<div>Keyword: <input type="text"/></div>				
<div>GO!</div>				
<div>SEARCH TIPS</div> <div>* * *</div>				
<div><div>Company A</div><div>Information about G2B Company A</div><div>Company G</div><div>Information about G2B Company G</div></div>				
<div>Reverse Advertising Sites</div>				
<div>Registered Vendor Links</div> <div><div>Abcd.com</div><div>cdef.com</div><div>1234z.com</div><div>23ezid..com</div><div>pkkw.com</div><div>er5lcn.com</div></div>				
<div>Feedback</div> <div>Submit!</div>				

FIGURE 33



NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE												
<div>WEBSITE LOGO</div> <div>Choose a Channel</div> <div>All G2B Tender Procurement Domains </div> <div>Advanced Search</div>												
DOMAIN A	DOMAIN B	DOMAIN C	DOMAIN D	OTHER DOMAINS								
ADVANCED SEARCH AGENTS ARE ON!												
Enter a "MULTILINGUAL CHARACTER" keyword and click GO!												
SEARCH TIPS												
<div><div><input type="checkbox"/> Select All</div><div>Multilingual Government Networks</div><table border="1"><tr><td>Public Body</td><td>Speed</td><td>Air/Shipping/Ground/Free Overnight Del.</td><td>Ease of Navigation</td></tr><tr><td><input type="checkbox"/> G2B Company G</td><td>↑↑↑↑↑</td><td>⇒</td><td>EEEE</td></tr></table></div> <div><div>Time Out</div><div>Reserved Price Range</div><div>Manufacturer or OEM</div><div>Keyword:</div></div> <div><div></div><div>From \$ <input type="text"/> To \$ <input type="text"/></div><div><input type="text"/></div><div><input type="text"/> </div></div>					Public Body	Speed	Air/Shipping/Ground/Free Overnight Del.	Ease of Navigation	<input type="checkbox"/> G2B Company G	↑↑↑↑↑	⇒	EEEE
Public Body	Speed	Air/Shipping/Ground/Free Overnight Del.	Ease of Navigation									
<input type="checkbox"/> G2B Company G	↑↑↑↑↑	⇒	EEEE									

FIGURE 34

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> </div>				
NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE				
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <h2 style="margin: 0;">WEBSITE LOGO</h2> </div> <div style="text-align: center;"> Choose a Channel <div style="border: 1px solid black; padding: 2px 10px;">All Ontological Domains</div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-top: 2px;">▼</div> </div> </div>				
Advanced Search				
DOMAIN A	DOMAIN B	DOMAIN C	DOMAIN D	OTHER DOMAINS
QUICK SEARCH				
Enter a "MULTILINGUAL CHARACTER" keyword and click GO!				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Keyword: <input style="width: 80%;" type="text"/></p> <p style="text-align: center; margin-top: 5px;"> GO! </p> <p style="margin-top: 10px;">SEARCH TIPS</p> <p style="margin-left: 20px;">* * *</p> </div> <div style="width: 40%;"> <p>For B2B Trading Exchanges, Auctions, Vertical Portals, Production and Non- Production e- Procurement Supplies</p> <p>Agricultural / Farming Apparel Automotive/ Transportation Business Machines Computers & Electronics Industrial Equipment Medical & Scientific Equipment</p> <p>More Business to Business MRO/Raw Materials Office Furnishings Office Supplies Real Estate Restaurant/Hospitality Services Travel & Entertainment</p> </div> <div style="width: 30%; text-align: center;"> <p>Reverse Advertising Sites</p> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Registered Vendor Links</p> <p>Abcd.com cdef.com 1234z.com 23ezid.com pkkw.com erficn.com</p> </div> <div style="width: 30%;"> <p>Feedback</p> <p style="border: 1px solid black; height: 20px; width: 100%;"></p> </div> <div style="width: 30%;"> <p>Submit!</p> </div> </div>				

FIGURE 35

NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE

WEBSITE LOGO

Choose a Channel

All Ontological Domains

Advanced Search

DOMAIN A

DOMAIN B

DOMAIN C

DOMAIN D

OTHER DOMAINS

ADVANCED SEARCH AGENTS ARE ON!

Enter a "MULTILINGUAL CHARACTER" keyword and click GO!

SEARCH TIPS

Select All

Multilingual B2B Suppliers

Online Stores

Speed

Air/Shipping/Ground/Free Overnight Del.

Ease of Navigation

☐ B2B Company 1

↑↑↑↑↑

⇒

EEEE

☐ B2B Company 2

↑↑↑↑↑↑↑

⇒

EEEEEE

☐ B2B Company 3

↑↑↑↑↑

⇒

EEEE

☐ B2B Company 4

↑↑↑↑↑

⇒

EEEE

Time Out

Price Range

From \$

To \$

Manufacturer

Keyword:

GO!

FIGURE 36





NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE									
Choose a Channel									
All Domains 									
Advanced Search									
DOMAIN A									
DOMAIN B									
DOMAIN C									
DOMAIN D									
OTHER DOMAINS									
QUICK SEARCH									
Enter a "MULTILINGUAL CHARACTER" keyword and click GO!									
Keyword: <input type="text"/>									
									
SEARCH TIPS									
* * *									
Hot Sellers Domain A									
Image Item A		Description Item A		Image Item B		Description Item B			
Image Item 1		Description Item 1		Image Item G		Description Item G			
Image Item A		Description Item A		Image Item K		Description Item K			
									
Abcd.com cdef.com					23ezid..com				
1234z.com					pkkw.com				
er5lcln.com					Submit!				

FIGURE 37

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> </div>																																				
<h2 style="margin: 0;">WEBSITE LOGO</h2> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> <p>Choose a Channel</p> <div style="border: 1px solid black; padding: 2px 10px;">All Domains</div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-top: 2px;">▽</div> </div> <div style="text-align: center;"> <p>Advanced Search</p> </div> </div>																																				
<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px 5px;">DOMAIN A</div> <div style="border: 1px solid black; padding: 2px 5px;">DOMAIN B</div> <div style="border: 1px solid black; padding: 2px 5px;">DOMAIN C</div> <div style="border: 1px solid black; padding: 2px 5px;">DOMAIN D</div> <div style="border: 1px solid black; padding: 2px 5px;">OTHER DOMAINS</div> </div>																																				
<p>ADVANCED SEARCH AGENTS ARE ON!</p>																																				
<p>Enter a "MULTILINGUAL CHARACTER" keyword and click GO!</p>																																				
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>SEARCH TIPS</p> <p>* * *</p> </div> <div style="width: 50%;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <input type="checkbox"/> Select All </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Online Stores</th> <th style="width: 15%;">Speed</th> <th style="width: 30%;">Air/Shipping/Ground/Free Overnight Del.</th> <th style="width: 25%;">Ease of Navigation</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Store 1AAC</td> <td>↑↑↑↑</td> <td style="text-align: center;">⇒</td> <td>EEEE</td> </tr> <tr> <td><input type="checkbox"/> Store 1443A</td> <td>↑↑↑↑↑↑</td> <td style="text-align: center;">⇒</td> <td>EE</td> </tr> <tr> <td><input type="checkbox"/> Store 1443A</td> <td>↑↑↑↑↑</td> <td style="text-align: center;">⇒</td> <td>EE</td> </tr> <tr> <td colspan="4" style="text-align: center; border-top: 1px solid black;">Chinese Vendors</td> </tr> <tr> <td><input type="checkbox"/> Select All</td> <td colspan="3"></td> </tr> <tr> <td><input type="checkbox"/> Store C5A3</td> <td>↑↑↑↑↑↑</td> <td style="text-align: center;">⇒</td> <td>EEEE</td> </tr> <tr> <td><input type="checkbox"/> Store DRGWS4</td> <td>↑↑↑↑↑↑</td> <td style="text-align: center;">⇒</td> <td>EEEE</td> </tr> </tbody> </table> </div> </div> <div style="margin-top: 10px;"> <p>Time Out </p> <p>Price Range From \$ To \$ </p> <p>Manufacturer </p> <p>Keyword: </p> <div style="display: flex; align-items: center; margin-top: 5px;"> GO! </div> </div>					Online Stores	Speed	Air/Shipping/Ground/Free Overnight Del.	Ease of Navigation	<input type="checkbox"/> Store 1AAC	↑↑↑↑	⇒	EEEE	<input type="checkbox"/> Store 1443A	↑↑↑↑↑↑	⇒	EE	<input type="checkbox"/> Store 1443A	↑↑↑↑↑	⇒	EE	Chinese Vendors				<input type="checkbox"/> Select All				<input type="checkbox"/> Store C5A3	↑↑↑↑↑↑	⇒	EEEE	<input type="checkbox"/> Store DRGWS4	↑↑↑↑↑↑	⇒	EEEE
Online Stores	Speed	Air/Shipping/Ground/Free Overnight Del.	Ease of Navigation																																	
<input type="checkbox"/> Store 1AAC	↑↑↑↑	⇒	EEEE																																	
<input type="checkbox"/> Store 1443A	↑↑↑↑↑↑	⇒	EE																																	
<input type="checkbox"/> Store 1443A	↑↑↑↑↑	⇒	EE																																	
Chinese Vendors																																				
<input type="checkbox"/> Select All																																				
<input type="checkbox"/> Store C5A3	↑↑↑↑↑↑	⇒	EEEE																																	
<input type="checkbox"/> Store DRGWS4	↑↑↑↑↑↑	⇒	EEEE																																	

FIGURE 38

NAVIGATION BUTTONS TO OTHER PAGES IN WEBSITE

WEBSITE LOGO

Choose a Channel
ALL DOMAINS

Advanced Search

DOMAIN A DOMAIN B DOMAIN C DOMAIN D OTHER DOMAINS

QUICK SEARCH

Enter a "MULTILINGUAL CHARACTER" keyword and click GO!

Keyword:

SEARCH TIPS
*
*
*

Search Results

Products
Your search for XX returned 5 Domain C items.

Model / Features	Store	Price
<u>AMST XX Widget</u> [Features]	Store 1443A	\$399.95 Buy now
<u>AMST2 XX Widget</u> [Features]	Store 1443A	\$329.95 Buy now
<u>AMST7 XX Widget</u> [Features]	Store DRGWS4	\$459.95 Buy now
<u>AMST7 XX Widget</u> [Features]	Store 4U\$US	\$499.95 Buy now
<u>ZRTQ XX Widget</u> [Features]	Store OOHE	\$529.95 Buy now

FIGURE 39

[WEBSITE INTERNAL LINKS]									
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>[SEARCH WEBSITE LOGO]</p> </div> <div style="text-align: center;"> <p>Choose A Channel</p> <div style="border: 1px solid black; padding: 2px 10px;">SELECTED CHANNEL ▾</div> <p><u>Advanced Search</u></p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="text-align: center;"> <div style="background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 30px; height: 30px; margin: 0 auto;"></div> <p>DOMAIN A</p> </div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p>DOMAIN B</p> </div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p>DOMAIN C</p> </div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p>DOMAIN D</p> </div> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <p>QUICK SEARCH</p> <p>Enter a "non-multilingual or multilingual character" keyword and hit enter or click GO!</p> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 10px;"> <div style="width: 45%;"> <p>Your Country/Locale:</p> <div style="border: 1px solid black; padding: 2px;">UNITED STATES ▾</div> </div> <div style="width: 45%;"> <p>Keyword:</p> <div style="border: 1px solid black; width: 100%; height: 25px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; text-align: center; line-height: 30px; margin: 0 auto;">GO</div> </div> </div> <p>Search Tips:</p>	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center; margin: 0;">HOT SELLERS AND AUCTION ITEMS</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 25%; text-align: center; padding: 5px;">MODEL PICTURE</td> <td style="width: 25%; text-align: center; padding: 5px;">PRODUCT DESCRIPTION</td> <td style="width: 25%; text-align: center; padding: 5px;">MODEL PICTURE</td> <td style="width: 25%; text-align: center; padding: 5px;">PRODUCT DESCRIPTION</td> </tr> <tr> <td style="text-align: center; padding: 5px;">MODEL PICTURE</td> <td style="text-align: center; padding: 5px;">PRODUCT DESCRIPTION</td> <td style="text-align: center; padding: 5px;">MODEL PICTURE</td> <td style="text-align: center; padding: 5px;">PRODUCT DESCRIPTION</td> </tr> </table> </div>	MODEL PICTURE	PRODUCT DESCRIPTION	MODEL PICTURE	PRODUCT DESCRIPTION	MODEL PICTURE	PRODUCT DESCRIPTION	MODEL PICTURE	PRODUCT DESCRIPTION
MODEL PICTURE	PRODUCT DESCRIPTION	MODEL PICTURE	PRODUCT DESCRIPTION						
MODEL PICTURE	PRODUCT DESCRIPTION	MODEL PICTURE	PRODUCT DESCRIPTION						

FIGURE 40

WEBSITE INTERNAL LINKS

SEARCH WEBSITE
LOGO

Choose A Channel
SELECTED CHANNEL
Advanced Search

DOMAIN A
DOMAIN B
DOMAIN C
DOMAIN D

QUICK SEARCH

Enter a "non-multilingual or multilingual character" keyword and hit enter or click GO!

Your Country/Locale:

UNITED STATES
Country A
Country B
Country C
Country D
Country E
Country F
Country G
Country H
Country I

HOT SELLERS AND AUCTION ITEMS

MODEL
PICTURE

PRODUCT
DESCRIPTION

MODEL
PICTURE

PRODUCT
DESCRIPTION

MODEL
PICTURE

PRODUCT
DESCRIPTION

MODEL
PICTURE

PRODUCT
DESCRIPTION

FIGURE 41

[WEBSITE INTERNAL LINKS]

[SEARCH WEBSITE LOGO]

Choose A Channel
SELECTED CHANNEL ▾

Advanced Search

DOMAIN A DOMAIN B DOMAIN C DOMAIN D

QUICK SEARCH

Enter a "non-multilingual or multilingual character" keyword and hit enter or click GO!

Your Country/Locale:
UNITED STATES ▾

Keyword:

GO

Search Tips:

Search Results

Products
Your search for XXX returned NNN item(s)

Description/Thumbnail		Store	Price
MODEL PICTURE	DESCRIPTION	STORE	\$PRICE <input type="button" value="buy now"/>
MODEL PICTURE	DESCRIPTION	STORE	\$PRICE <input type="button" value="buy now"/>
MODEL PICTURE	DESCRIPTION	STORE	\$PRICE <input type="button" value="buy now"/>

FIGURE 42

[WEBSITE INTERNAL LINKS]									
[SEARCH WEBSITE LOGO]				Choose A Channel					
				SELECTED CHANNEL ▾					
DOMAIN A				DOMAIN B		DOMAIN C		DOMAIN D	
ADVANCED SEARCH AGENTS ARE ON!									
Enter a "non-multilingual or multilingual character" keyword and hit enter or click GO!									
Your Country/Locale: UNITED STATES ▾									
Search Tips:									
Store Speed Air/Shipping/Ground/Free Overnight Delivery Ease of Navigation									
<input type="checkbox"/> Store A Rating		Speed Rating		Delivery Rating		Navigation Rating			
<input type="checkbox"/> Store B Rating		Speed Rating		Delivery Rating		Navigation Rating			
<input type="checkbox"/> Store C Rating		Speed Rating		Delivery Rating		Navigation Rating			
<input type="checkbox"/> Store D Rating		Speed Rating		Delivery Rating		Navigation Rating			
<input type="checkbox"/> Store E Rating		Speed Rating		Delivery Rating		Navigation Rating			
<input type="checkbox"/> Store F Rating		Speed Rating		Delivery Rating		Navigation Rating			
Time out									
Price and/or bid range									
From \$ To \$									
Maker/Seller/Publisher/Artist Actor									
Keyword									
GO									

FIGURE 43

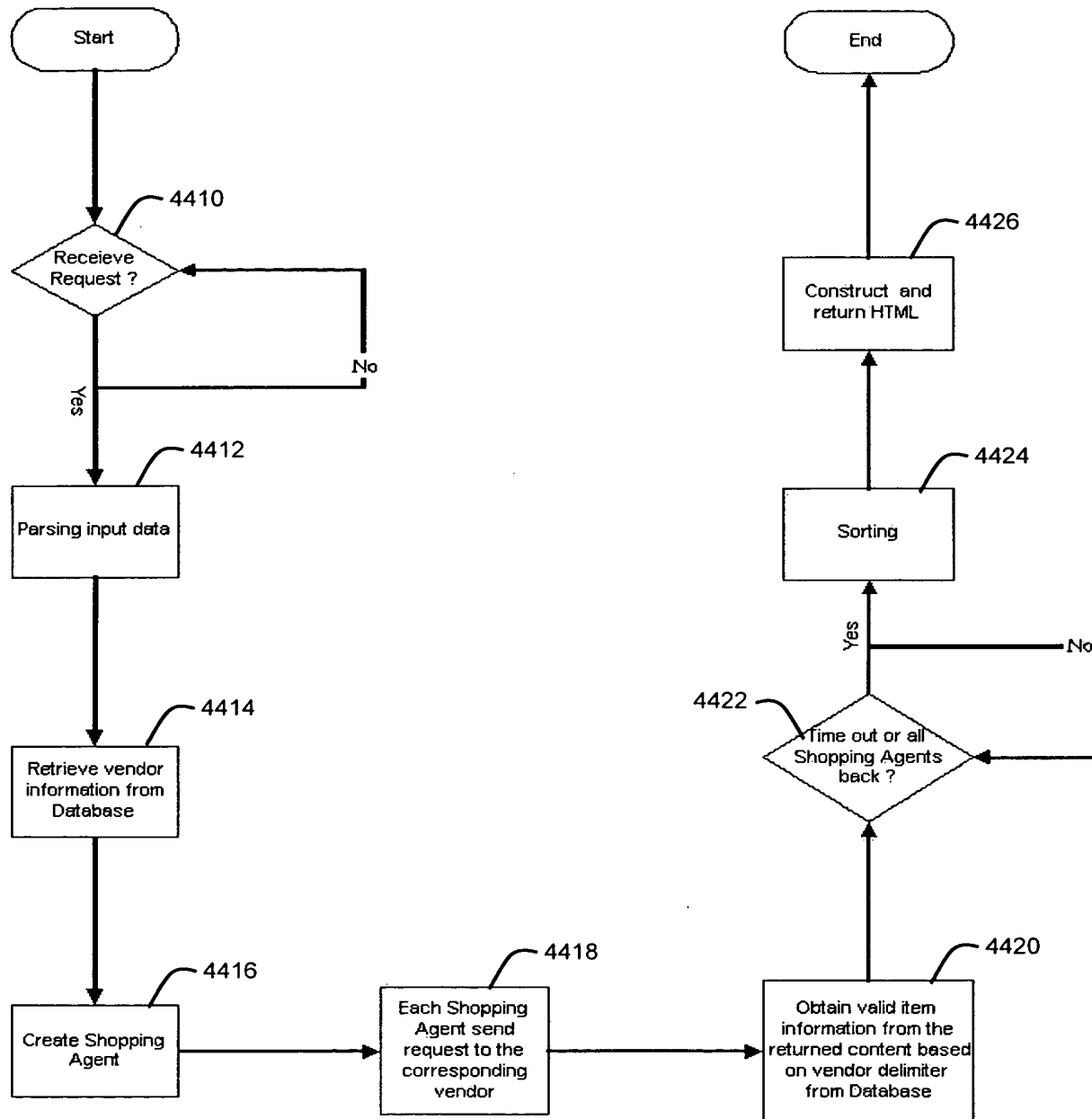


FIG. 44

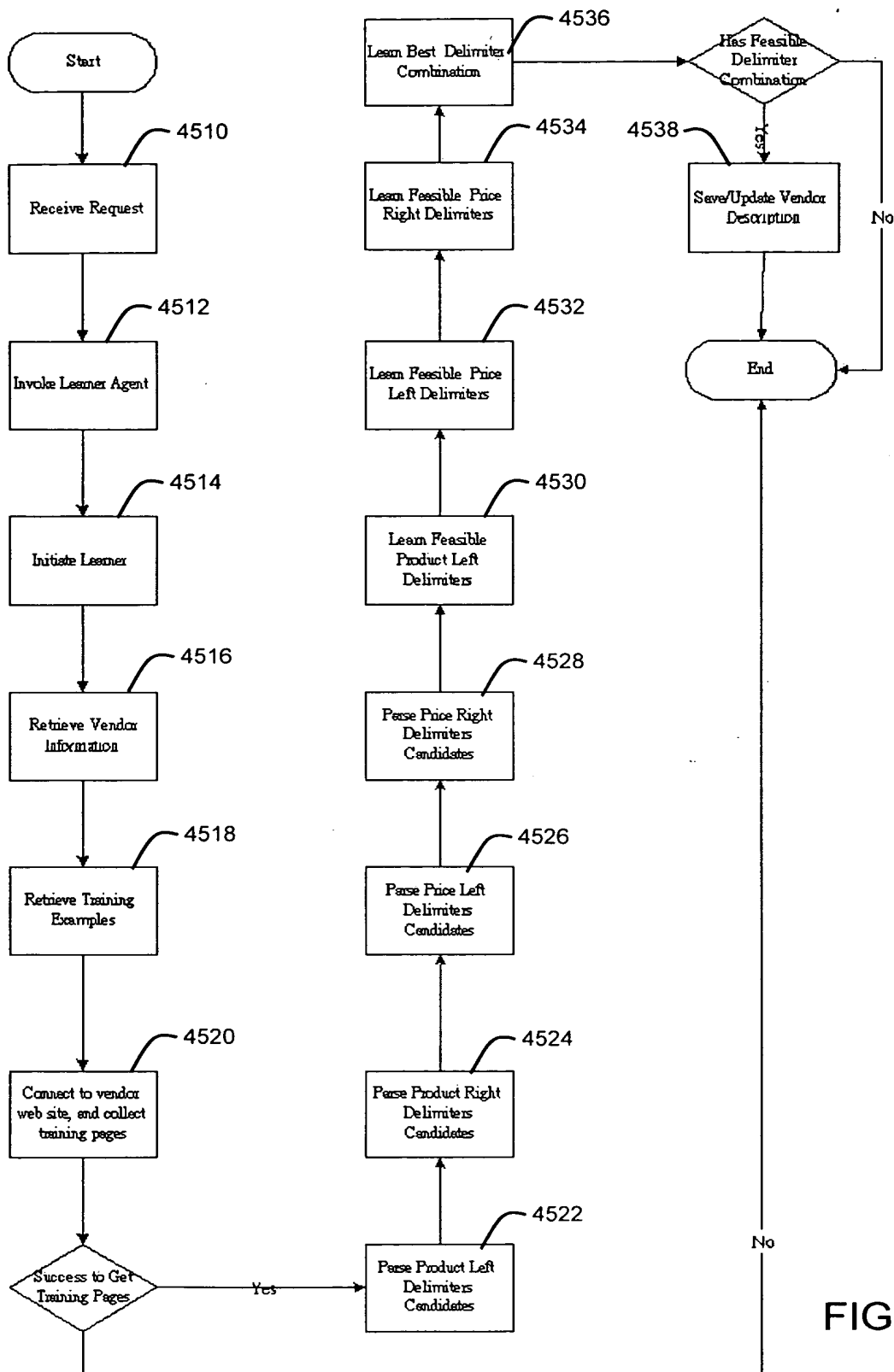


FIG. 45

<u>Data Field</u>	<u>Description</u>	<u>Allowed Value</u>
Country ID	Distinct Country Name	Any
Country Name	Display Name of the Country.	Any
Encoding	Display MIME type of the Web sites in this country.	Valid MIME Type, A pull-down list of MIME Type is provided for selection

FIGURE 46

COOLSA Administration Console			Country Vendor																																																				
List Of Countries																																																							
<div> <div>List Of Countries</div> <div>Add</div> <table> <tr> <th>Country ID</th><th>Country Name</th><th>Encoding</th><th>Action</th></tr> <tr> <td>zh TW</td><td>Taiwan</td><td>Big5</td><td>Delete</td></tr> <tr> <td>Norway</td><td>Norway</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>Brazil</td><td>Brazil</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>Belgium</td><td>Belgium</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>Poland</td><td>Poland</td><td>UTF8</td><td>Delete</td></tr> <tr> <td>zh HK</td><td>Hong Kong SAR</td><td>Big5</td><td>Delete</td></tr> <tr> <td>United Arab Emirates</td><td>United Arab Emirates</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>UK</td><td>United Kingdom</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>en US</td><td>United States</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>India</td><td>India</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>Thailand</td><td>Thailand</td><td>8859_1</td><td>Delete</td></tr> <tr> <td>Croatia</td><td>Croatia</td><td>8859_1</td><td>Delete</td></tr> </table> </div>				Country ID	Country Name	Encoding	Action	zh TW	Taiwan	Big5	Delete	Norway	Norway	8859_1	Delete	Brazil	Brazil	8859_1	Delete	Belgium	Belgium	8859_1	Delete	Poland	Poland	UTF8	Delete	zh HK	Hong Kong SAR	Big5	Delete	United Arab Emirates	United Arab Emirates	8859_1	Delete	UK	United Kingdom	8859_1	Delete	en US	United States	8859_1	Delete	India	India	8859_1	Delete	Thailand	Thailand	8859_1	Delete	Croatia	Croatia	8859_1	Delete
Country ID	Country Name	Encoding	Action																																																				
zh TW	Taiwan	Big5	Delete																																																				
Norway	Norway	8859_1	Delete																																																				
Brazil	Brazil	8859_1	Delete																																																				
Belgium	Belgium	8859_1	Delete																																																				
Poland	Poland	UTF8	Delete																																																				
zh HK	Hong Kong SAR	Big5	Delete																																																				
United Arab Emirates	United Arab Emirates	8859_1	Delete																																																				
UK	United Kingdom	8859_1	Delete																																																				
en US	United States	8859_1	Delete																																																				
India	India	8859_1	Delete																																																				
Thailand	Thailand	8859_1	Delete																																																				
Croatia	Croatia	8859_1	Delete																																																				

FIGURE 48

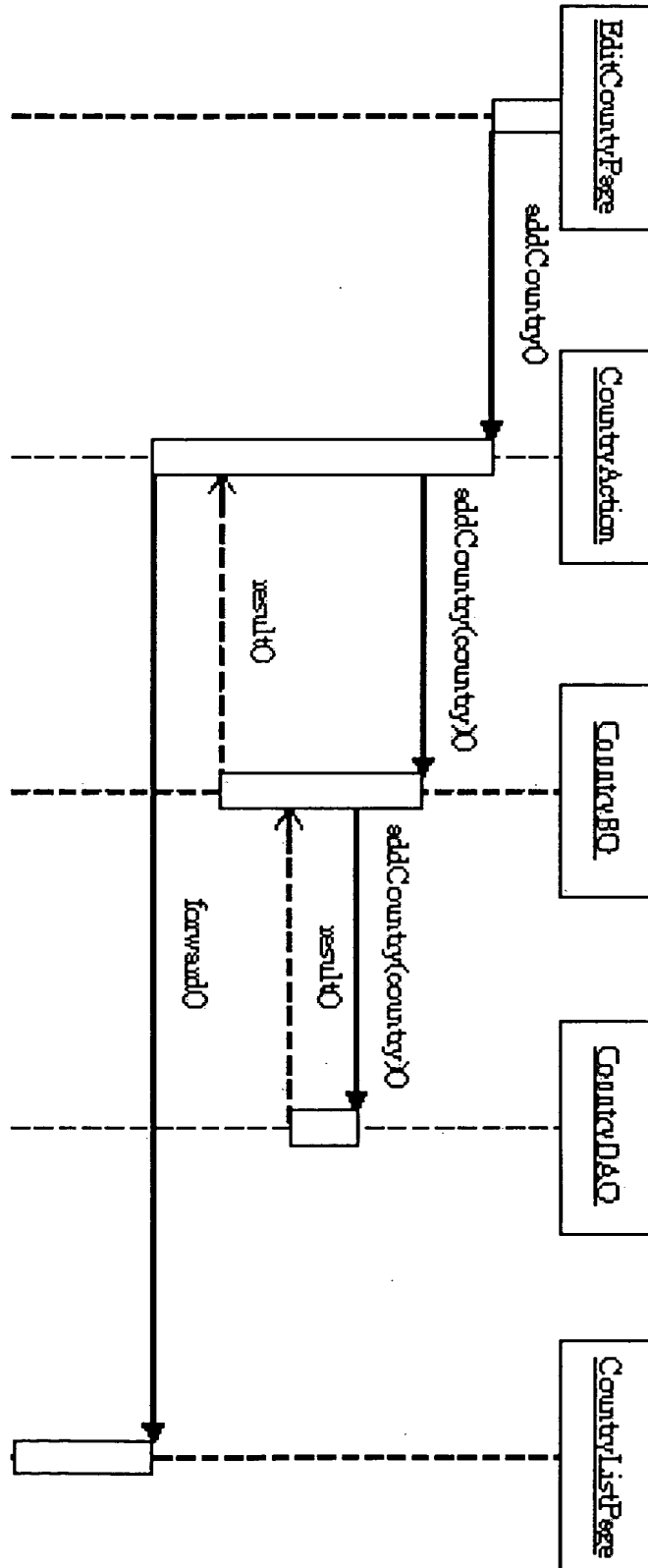


FIG. 47

COOLSA Administration Console		Country Vendor
Countries > Edit Country Information		
Edit Country Information		
Country ID	zh_HK	
Country Name	Hong Kong SAR (-- Existing Countries --)	
Encoding	Big5	
		Save Cancel

FIGURE 49

Edit Country Information	
Country ID	
Country Name	(-- Existing Countries --)
Encoding	ISO8859_1
Save Cancel	

FIGURE 50

<u>Data Field</u>	<u>Description</u>	<u>Allowed Value</u>
Vendor ID	Distinct Vendor ID	System generated
Vendor Name	Display Name of the Vendor.	Any
Description	Vendor Description	Any
URL	Vendor URL	Valid URL
Form URL	Vendor Form URL	Valid URL
Country	Country where the vendor sell the products	A pull-down list of country is provided for selection
Currency	Currency which the vendor used for the price of the products	A pull-down list of currency is provided for selection

FIGURE 51

COOLSA Administration Console					Country Vendor
List Of Vendors					
<div> List Of Vendors <input type="text" value="--All Countries--"/> <input type="button" value="Add"/> </div>					
Vendor ID	Vendor Name	Description	URL	Country	Currency
59	Elgiganten	Norway shop	http://www.elgiganten.no/	Norway	
58	Quelle	Germany shop	http://www.quelle.de/	Germany	€
57	OTTO	Germany shop	http://www.neu.otto.de	Germany	EUR
56	Trend Machine	Germany shop	http://store.europe.yahoo.com/trendmachine/index.html	Germany	EUR
55	Media World	Italy shop	http://store.europe.yahoo.com/mediaworld/index.html	Italy	€
54	Piazzaerbe	Italy shop	http://store.europe.yahoo.com/piazzaerbe/	Italy	€
53	Alcosto	Italy shop	http://www.alcosto.it	Italy	€
51	Vistek	Canadian shop	http://www.vistek.ca	Canada	\$
50	HBC Online	Canadian shop	http://www.hbc.com/	Canada	\$
49	Red dots	One of the largest auction site in HK	http://www.red-dots.com/	Hong Kong SAR	HK\$
48	HK Yahoo Auction	One of the largest auction site in HK	http://hk.auctions.yahoo.com/	Hong Kong SAR	HK\$
47	Go to HK	One of the largest auction site in HK	http://www.go2hk.com	Hong	HK\$

FIGURE 53

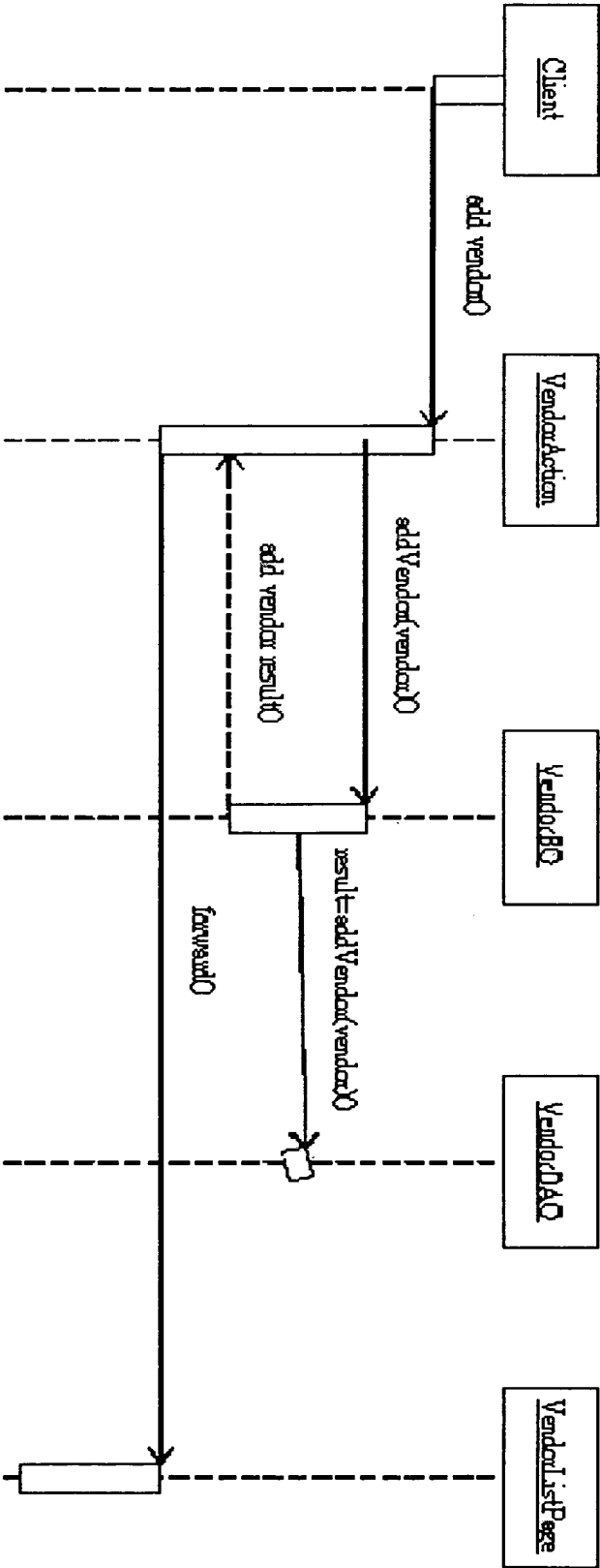


FIG. 52

COOLSA Administration Console					Country Vendor
List Of Vendors United States Add					
Vendor ID	Vendor Name	Description	URL	Country	Currency
35	Best Buy Digital		http://www.bestbuydigital.com	United States	US\$
36	Brandsmall.com		http://www.brandsmall.com	United States	US\$
18	buydig.com		http://www.buydig.com	United States	US\$
19	clubmac.com		http://www.clubmac.com/clubmac/	United States	US\$
37	Compuvisor	Computer & Electronics Wholesale Superstore	http://www.compuvisor.com/	United States	US\$
20	direct.mwave.com		http://direct.mwave.com	United States	US\$
10009	eBay		http://www.ebay.com	United States	
38	Mentline	Compactflash, Smartmedia card, DVD-R, CD-R, Ink jet cartridges	www.Mentline.com	United States	US\$
17	msn.com		http://eshop.msn.com	United States	\$
21	pcrush.com/		http://www.pcrush.com/	United States	US\$
39	Shop4tech.net	cheap CD-R, DVD-R, Compact Flash, Computer Desk, ink cartridges	Shop4tech.net	United States	US\$
33	Tek Gallery		http://www.tekgallery.com/	United States	\$
40	Vio Software	Best Price on Microsoft, Adobe, Corel, Symantec Software.	http://www.viosoftware.com	United States	US\$
34	Walmart		http://www.walmart.com/	United States	US\$

FIGURE 54

COOLSA Administration Console		Country Vendor																								
Vendor > Vendor Details																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Vendor Information</th> <th style="text-align: right;">Edit Delete</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;">Vendor ID</td> <td colspan="2">10009</td> </tr> <tr> <td>Vendor Name</td> <td colspan="2">eBay</td> </tr> <tr> <td>Description</td> <td colspan="2" style="height: 40px;"></td> </tr> <tr> <td>URL</td> <td colspan="2">http://www.ebay.com</td> </tr> <tr> <td>Form URL</td> <td colspan="2">http://search.ebay.com/search/search.dll?MfcISAPICommand=GetResult&ht=1&SortProperty=MetaEndSort&query=</td> </tr> <tr> <td>Country</td> <td colspan="2">United States</td> </tr> <tr> <td>Currency</td> <td colspan="2">\$</td> </tr> </tbody> </table>			Vendor Information		Edit Delete	Vendor ID	10009		Vendor Name	eBay		Description			URL	http://www.ebay.com		Form URL	http://search.ebay.com/search/search.dll?MfcISAPICommand=GetResult&ht=1&SortProperty=MetaEndSort&query=		Country	United States		Currency	\$	
Vendor Information		Edit Delete																								
Vendor ID	10009																									
Vendor Name	eBay																									
Description																										
URL	http://www.ebay.com																									
Form URL	http://search.ebay.com/search/search.dll?MfcISAPICommand=GetResult&ht=1&SortProperty=MetaEndSort&query=																									
Country	United States																									
Currency	\$																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="text-align: left;">Traming Example</th> <th style="text-align: right;">Add</th> </tr> <tr> <th>Example ID</th> <th>Search Word</th> <th>Product Name</th> <th>Price</th> <th colspan="2">Action</th> </tr> </thead> <tbody> <tr> <td>10019</td> <td>Tablet PC</td> <td>Compaq Tablet PC TC1000</td> <td>\$1,699.00</td> <td colspan="2" style="text-align: center;">Delete</td> </tr> <tr> <td>10020</td> <td>Tablet PC</td> <td>ADR Flite Guide 3000 Fujitsu Tablet PC (NEW)</td> <td>\$987.60</td> <td colspan="2" style="text-align: center;">Delete</td> </tr> </tbody> </table>			Traming Example					Add	Example ID	Search Word	Product Name	Price	Action		10019	Tablet PC	Compaq Tablet PC TC1000	\$1,699.00	Delete		10020	Tablet PC	ADR Flite Guide 3000 Fujitsu Tablet PC (NEW)	\$987.60	Delete	
Traming Example					Add																					
Example ID	Search Word	Product Name	Price	Action																						
10019	Tablet PC	Compaq Tablet PC TC1000	\$1,699.00	Delete																						
10020	Tablet PC	ADR Flite Guide 3000 Fujitsu Tablet PC (NEW)	\$987.60	Delete																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Vendor Description</th> <th style="text-align: right;">Edit Delete Learn</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;">Head</td> <td colspan="2" style="height: 20px;"></td> </tr> <tr> <td>Tail</td> <td colspan="2" style="height: 20px;"></td> </tr> <tr> <td>Item Left Delimiter</td> <td colspan="2"><a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category="</td> </tr> <tr> <td>Item Right Delimiter</td> <td colspan="2"></fo</td> </tr> <tr> <td>Price Left Delimiter</td> <td colspan="2"><td nowrap align=right valign=top width=12%><font siz</td> </tr> <tr> <td>Price Right Delimiter</td> <td colspan="2">
</td> </tr> </tbody> </table>			Vendor Description		Edit Delete Learn	Head			Tail			Item Left Delimiter	<a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category="		Item Right Delimiter	</fo		Price Left Delimiter	<td nowrap align=right valign=top width=12%><font siz		Price Right Delimiter	 				
Vendor Description		Edit Delete Learn																								
Head																										
Tail																										
Item Left Delimiter	<a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category="																									
Item Right Delimiter	</fo																									
Price Left Delimiter	<td nowrap align=right valign=top width=12%><font siz																									
Price Right Delimiter	 																									

FIGURE 55

COOLSA Administration Console		Country Vendor
Vendors > Edit Vendor Information		
Edit Vendor Information		
Vendor ID	10009	
Vendor Name	eBay	
Description	<div></div>	
Vendor URL	http://www.ebay.com	
Form URL	http://search.ebay.com/search/search.dll?MfcISAPICommand=GetResult&ht=1&SortPro	
Country	United States ▼	
Currency	\$ ▼	
		Save Cancel

FIGURE 56

COOLSA Administration Console		Country Vendor
Vendors > Edit Vendor Information		
<hr/>		
Edit Vendor Information		
Vendor ID		
Vendor Name		
Description	<div><div></div><div></div></div>	
Vendor URL		
Form URL		
Country	Africa	
Currency	\$	
		<div>Save Cancel</div>

FIGURE 57

http://192.168.1.48:8081/cooladmin/example/edit_training_example

Edit Training Example

Edit Training Example	
Example ID	
Search Word	
Product Name	
Price	
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

FIGURE 58

COOLSA Administration Console Country | Vendor

Vendor Detail > Edit Vendor Description

Edit Vendor Description	
Vendor Name	eBay
Item Left Delimiter	<a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category="
Item Right Delimiter	</fo
Price Left Delimiter	<td nowrap align=right valign=top width=124><font siz
Price Right Delimiter	
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

FIGURE 59



FIGURE 60A

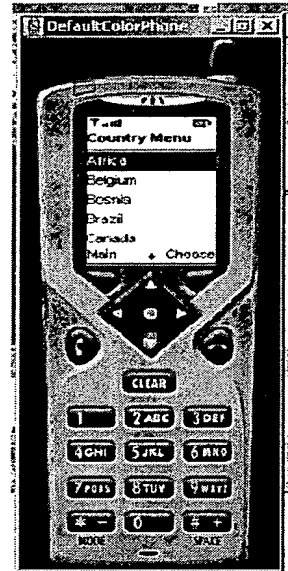


FIGURE 60B

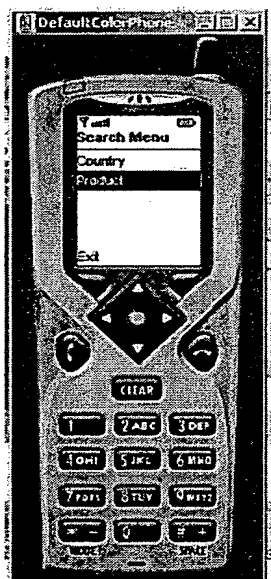


FIGURE 61A

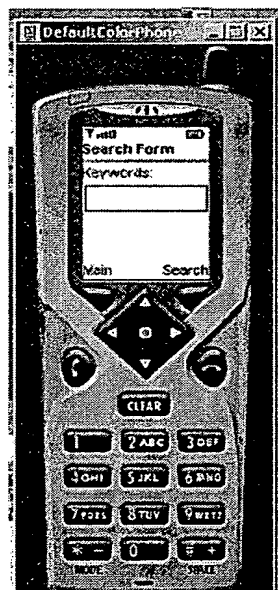


FIGURE 61B

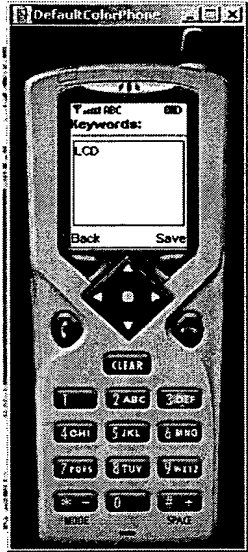


FIGURE 61C

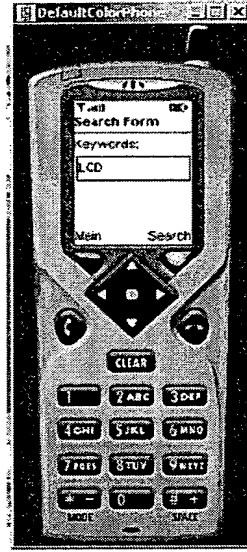


FIGURE 61D

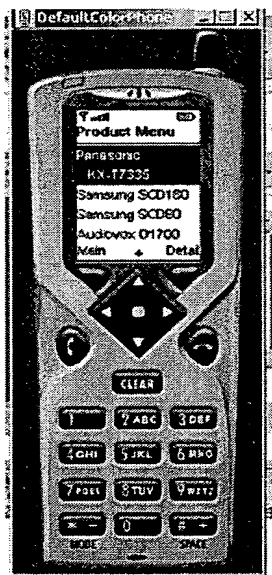


FIGURE 61E

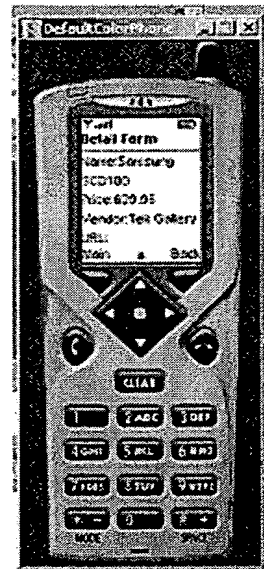


FIGURE 61F

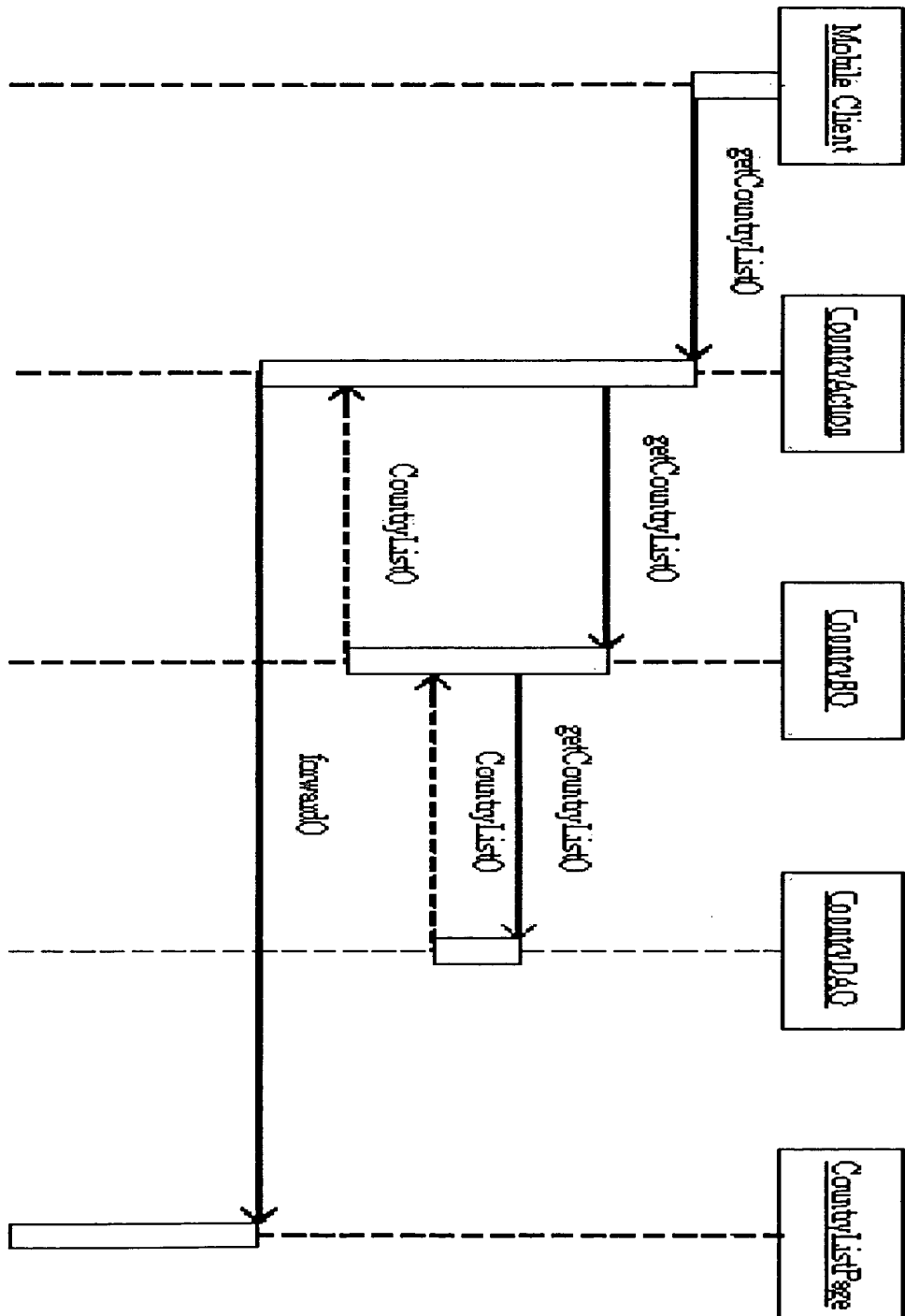


FIG. 62

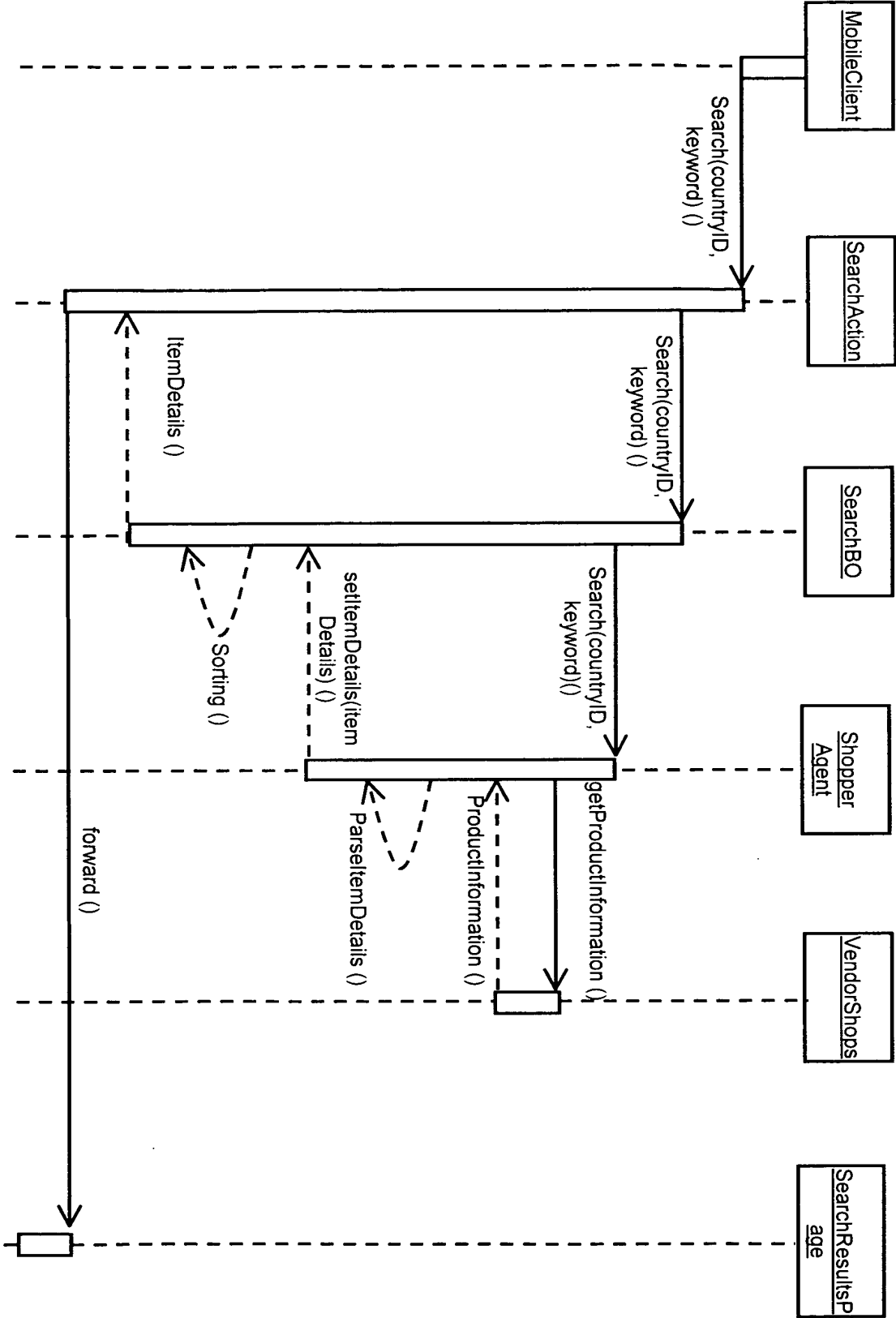


FIG. 63

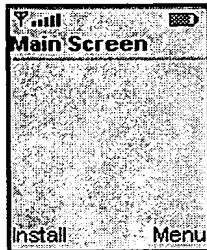


FIGURE 64A



FIGURE 64B

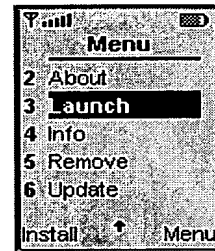


FIGURE 64C



FIGURE 64D

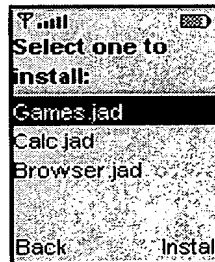


FIGURE 64E

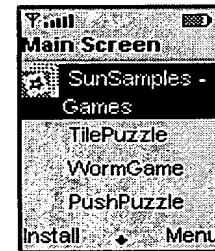


FIGURE 64F

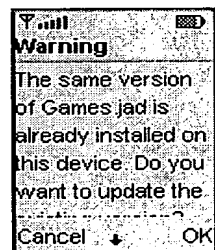


FIGURE 64G

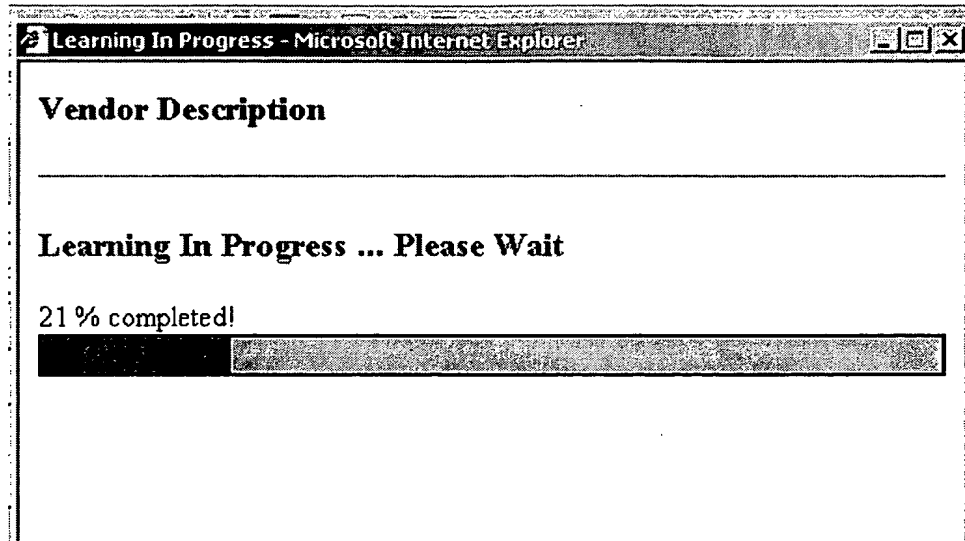


FIGURE 65